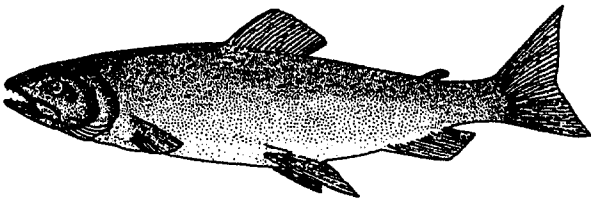
1996 ANNEX
CHINOOK SALMON PLAN FOR SOUTHEAST ALASKA

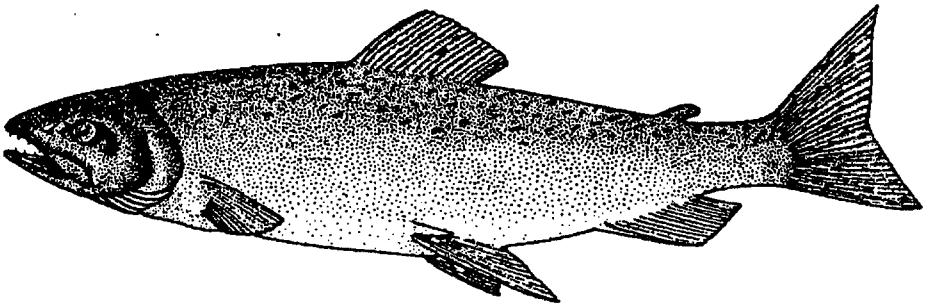
By

Steve McGee,
Bruce Bachen,
Gary Freitag,
Mark Stopha,
Dave Gaudet,
Ron Josephson,
Gordon Garcia,

and

Frank Thrower





Regional Information Report No. RIR 1J96-24

Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
Juneau, Alaska

December 1996

1996 ANNEX

CHINOOK SALMON PLAN FOR SOUTHEAST ALASKA

By

Steve McGee
Bruce Bachen
Gary Freitag
Mark Stopha
Dave Gaudet
Ron Josephson
Gordon Garcia

and

Frank Thrower

Regional Information Report No. RIR 1J96-24

Alaska Department of Fish and Game
Commercial Fisheries Management
and Development Division
P.O. Box 240020
Douglas, AK 99824-0020

December 1996

AUTHORS

Steve McGee is a fishery biologist for the Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Private Nonprofit Program, P.O. Box 25526, Juneau, AK 99802-5526.

Bruce Bachen is the operations manager for the Northern Southeast Regional Aquaculture Association, 1308 Sawmill Creek Road, Sitka, AK 99835.

Gary Freitag is a fishery biologist for the Southern Southeast Regional Aquaculture Association, 2721 Tongass Boulevard, Ketchikan, AK 99901.

Mark Stopha, Dave Gaudet, and Ron Josephson are fishery biologists for the Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, P.O. Box 240020, Douglas, AK 99824-0020.

Gordon Garcia is a projects coordinator with the Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Private Nonprofit Program, P.O. Box 240020, Douglas, AK 99824-0020.

Frank Thrower is a fishery biologist with the National Marine Fisheries Service, Auke Bay Laboratory, 11305 Glacier Highway, Juneau, AK 99801.

APPROVED AND ADOPTED

I, Frank Rue, Commissioner of the Alaska Department of Fish and Game, formally give my approval of the 1996 Annex to the Southeast Alaska Chinook Salmon Plan as per provisions of Alaska Statute 16.10.375. This plan is to remain in effect until altered or terminated by the Commissioner of the Alaska Department of Fish and Game.

Frank Rue
Commissioner
Alaska Department of Fish and Game

12-19-96
Date

TABLE OF CONTENTS

Section	Page
LIST OF TABLES	vii
LIST OF FIGURES	ix
I. INTRODUCTION	1
II. SUMMARY OF CHINOOK SALMON PRODUCTION, RESEARCH, HARVEST, AND ENHANCEMENT IN SOUTHEAST ALASKA	1
A. Wild Stock Production	1
B. Summary of Chinook Salmon Harvests in Southeast Alaska Fisheries	2
Winter Troll Fishery	4
Experimental Troll Fisheries	4
Terminal Troll Fisheries	5
General Summer Season	5
Net Fisheries	5
Recreational Fisheries	6
C. Enhanced Production	7
Hatchery Releases	7
Harvest of Hatchery Fish	8
Disposition of BY 95 Eggs	8
III. BROOD STOCK ALLOCATION	9
A. Brood Stock Development, Diversity, and Performance	9
B. Allocation Criteria	10
C. Allocation Increments	11
D. Allocation Plan	11
1. Wild brood stocks	11
A. Harding River	11
B. Farragut River	12
C. Chilkat River	12
2. Hatchery brood stocks	12
A. Crystal Lake Hatchery (Andrew Creek stock)	12
B. Port Armstrong Hatchery	12
C. Hidden Falls Hatchery	13

TABLE OF CONTENTS (continued)

Section **Page**

2. Hatchery brood stocks (continued)

D. Medvejie Hatchery 13
E. Gastineau Hatchery 13
F. Little Port Walter 13
G. Whitman Lake 14
H. Neets Bay 14
I. Deer Mountain 14

IV. HATCHERY RETURN PROJECTION PROCESS 15

A. Predictive Model for Little Port Walter Chinook Salmon Returns 15
B. Crystal Lake Hatchery Chinook Salmon Return Predictive Model 15
C. Deer Mountain Hatchery Chinook Salmon Return Predictive Model 15
D. Predictive Model for SSRAA Hatchery Returns 16
E. Predictive Model for NSRAA Hatchery Returns 16

V. CHINOOK PLANNING TEAM MEETING 16

VI. CHINOOK PLANNING TEAM RECOMMENDATIONS 17

TABLES 18

FIGURES 44

LIST OF TABLES

Table		Page
1.	Estimates of total escapements of chinook salmon to escapement indicator systems and to Southeast Alaska and Transboundary Rivers, 1981-1995	18
2.	Annual Southeast Alaska Commercial and recreational chinook salmon harvests and Alaska Hatchery contributions, in thousands of fish, 1965-1995	19
3	Estimated harvest and Alaska hatchery add-on of chinook salmon by commercial and recreational fisheries in Southeast Alaska, 1995	20
4.	Southeast Alaska winter troll fishery vessel landings, chinook salmon catches, and comparison with total season chinook catches, 1980–1995	21
5.	The number of salmon harvested and permits fished in the 1995 experimental and terminal troll fisheries	22
6.	Chinook salmon catch per fleet day (rounded to the nearest hundred) in the Southeast Alaska troll fishery during the general summer season, April 15 - September 30. 1984-1995	29
7.	Number of days, effort (boat days), and dates the Southeast Alaska troll fishery was open [chinook retention(CR)], closed to chinook fishing [chinook non-retention (CNR)] and closed to all species (all) during the general summer season April 15-September 30. 1978–1995	30
8.	Contribution in numbers and percent of chinook salmon produced by Alaska and other hatcheries in the winter, experimental, terminal, hatchery access, and general summer troll fisheries, 1989–1995	34
9.	Minimum estimated contributions of hatchery chinook salmon to sampled marine boat sport fisheries of Southeast Alaska during 1995	35
10.	Actual and projected releases of chinook salmon by brood year	36
11.	Estimated harvest of Alaska hatchery-produced chinook salmon in Southeast Alaska, 1980–1995	37
12.	Estimated harvest and escapement of chinook salmon from Southeast Alaska hatcheries in 1995	38

LIST OF TABLES (continued)

Table		Page
13.	Exploitation rate of chinook salmon at various enhancement facilities in Southeast Alaska by return year	39
14.	Percent distribution of hatchery chinook salmon troll catch by PMFC area, 1980-1995	40
15.	Chinook salmon egg takes in Southeast Alaska in 1995	42
16.	Utilization of 1995-brood chinook salmon eggs in enhancement programs	43

LIST OF FIGURES

Figure		Page
1.	Chinook salmon hatcheries in Southeast Alaska	44
2.	Experimental troll fishery areas (shaded areas with accompanying experimental fishery name) in Southeast Alaska	45
3.	Actual and projected releases of hatchery-produced chinook salmon in Southeast Alaska by calendar year (1979–1997)	46
4.	Actual and projected releases of hatchery-produced chinook salmon in Southeast Alaska by brood year (1978–1995)	47
5.	Percentage of Alaska hatchery-produced chinook salmon harvested in Southeast Alaska sport, net, and troll fisheries (1978–1995)	48
6.	Pacific Marine Fisheries Commission (PFMC) areas in Southeast Alaska.	49

I. INTRODUCTION

In 1983 an interagency team, the Chinook Salmon Planning Team, under the direction of the Commissioner of the Alaska Department of Fish and Game (ADF&G), developed a plan that included management, research, and policy guidelines for chinook salmon in Southeast Alaska. An annual update (Annex) to the *Chinook Salmon Plan for Southeast Alaska* has been compiled for each subsequent year. The 1996 Annex represents the fourteenth publication in this series.

The annexes to the *Chinook Salmon Plan* are intended to provide the reader with a perspective on the development of chinook salmon enhancement programs in Southeast Alaska as well as the status of wild stocks. Annexes to the *Chinook Salmon Plan* also review wild stock escapement trends, prior year harvest information, hatchery production and returns, numbers of hatchery and wild stock eggs taken for enhancement projects, and projected utilization of these eggs by facility and stock.

Overall, the combined production of both natural and enhanced stocks of chinook salmon in Southeast has been steadily decreasing each year. Agencies involved in chinook salmon propagation within the region have committed major resources to all aspects of chinook salmon production, primarily in response to needs of user groups and, more recently, to those gear types affected by the U.S./Canada Pacific Salmon Treaty (PST). The 1996 Annex examines the current status of chinook salmon production in relation to the *Comprehensive Salmon Plan for Southeast Alaska* and the PST. Virtually all chinook salmon production facilities funded by federal mitigation monies are now in production or in the process of developing their production capabilities. Initial planning called for a total of 100,000 harvestable chinook salmon adults annually for the troll fishery, with increased production to occur as rapidly as possible. Just over one-fourth of that total was harvested by the troll fleet in 1995. The locations of all hatcheries producing chinook salmon in Southeast Alaska are shown in Figure 1. The 1996 Annex includes information on directed troll fisheries for Alaska hatchery stocks and the hatchery add-on harvest report. In addition, the 1996 Annex includes a brief description of research projects involving Southeast Alaska chinook salmon.

II. Summary of Chinook Salmon Production, Research, Harvest, and Enhancement in Southeast Alaska

A. Wild Stock Production

The 1995 year marks the end of the 15-year chinook salmon rebuilding program (1981 to 1995). During this period, the department continued to estimate the escapement on 11 indicator systems. These escapements were measured against goals established prior to 1985. In general, these goals were set as the largest escapement seen prior to 1981. As a part of the rebuilding program, the department also conducted coded wire tagging studies, improved escapement estimation methods, and sampled age and sex data in the escapement in order to collect data that would, when included with escapement data, allow the use of Spawner Recruit analytical methods to set Maximum Sustained Yield (MSY) escapement goals.

Since the program was established, MSY escapement goals have been established for 5 of the 11-systems (Situk, and the Behm Canal systems: Unuk, Chickamin, Blossom and Keta rivers). Establishment of

Spawner Recruit MSY goals indicated that the Unuk and Keta rivers were within the ranges of desired escapement prior to the rebuilding program while the Blossom and Chickamin rivers were below desired escapements. Over the last 10 years, of the five systems with evaluated escapement goals, the Situk River has consistently been above the lower range in all years (Table 16). In Behm Canal, escapements to the Unuk River and the Keta River have consistently been above the lower range (eight-years) and have exceeded the upper range in three-years in the Unuk River and five years in the Keta River. The Blossom and Chickamin rivers have been below the lower range in four years, but have been above the point estimate in both systems in five years.

For the six systems for which MSY escapement goals have not been identified, a final assessment cannot be made at this time. However, escapement numbers in all of these streams has increased during the rebuilding period (since 1980). The department expects that the goals for the Andrew and King Salmon rivers will be identified prior to the summer of 1996. Preliminary goals for the transboundary rivers (Taku, Stikine, and Alsek rivers) will be identified and discussions begun with Canada on final goals. Reliable data for the Chilkat River has only been collected since 1991. Alternative methods for establishing a goal for this system are being investigated.

B. Summary of Chinook Salmon Harvests in Southeast Alaska Fisheries

The 1995 troll chinook fishery was managed to: 1) comply with provisions of the PST regarding chinook catch ceilings and minimize incidental mortalities, 2) continue the Southeast Alaska natural chinook rebuilding program, 3) harvest a total of 170,100 Treaty chinook salmon, 4) provide for a maximum harvest of Alaska hatchery-produced chinook salmon, and 5) Comply with the provisions of the Endangered Species Act.

Since the implementation of the PST, troll chinook catches had remained relatively stable until 1990 when an additional quota increase of 39,000 chinook salmon over previous years and a record Alaska hatchery add-on combined to produce a harvest of 287,400 fish. In 1992 the troll fishery was required to make up a cumulative all-gear overage from previous years, resulting in the second lowest chinook harvest on record (Table 2).

The Chinook Annex of the PST expired following the 1992 season and the PST negotiations have ended without agreement for chinook salmon in the succeeding years of 1993, 1994, and 1995. During the 1994-1995 cycle of the Pacific Salmon Commission (PSC), the preseason forecasts of abundance for the Robertson Creek Hatchery (British Columbia, Canada) chinook stock indicated a brood year failure. These fish have generally contributed significantly to the Southeast Alaska troll fishery. Additionally other chinook stocks were also projected to have lower than average survival. Concern was raised within the Chinook Technical Committee (CTC) of the PST that if Southeast Alaska fisheries harvested chinook at their historic ceiling of 263,000 fish, the harvest rates on commingled chinook stocks would exceed those of recent years (1991-1993).

The department agreed in principle, and proposed to restrain harvest rates to levels similar to those in recent years. However, historically the CTC pre-season projections of abundance of chinook stocks exploited by

the Southeast Alaska troll fishery have been found to consistently underestimate the abundance of these stocks. Post-season estimates of exploited stocks typically increase for three years following the fishery, resulting in potential lost harvest opportunities to Southeast Alaskan fishers. With these facts in mind, ADF&G technical staff presented an abundance-based approach for chinook management for Southeast Alaska to the US section of the PSC and to the National Marine Fisheries Service (NMFS). The regime is designed to actively manage the fishery harvest rate each year by allowing the catch to vary with the observed overall abundance of chinook salmon stocks. An initial catch quota is established using a fixed harvest rate based on a preseason projection of abundance from the CTC. The catch quota is then adjusted, up or down, depending on a measure of inseason abundance based on the catch performance of the troll fleet.

The department initially set the 1995 season all-gear catch quota of treaty fish at 230,000, based on a fixed harvest rate index and the CTC preseason index of abundance. The fishery was managed to comply with previous PST protocol as follows: the base catch was calculated by subtracting the "add-on," (Alaskan hatchery produced chinook minus pre-Treaty production and a risk factor), and applying a management range of ± 7.5% for accumulation of overages and underages beginning in 1987.

The first opening of the general summer troll fishery occurred from July 1 - July 10, and 75,800 chinook salmon were caught. Although the abundance, as measured by troll catches delivered during the first five days of the opening, indicated that a more liberal quota was warranted, Alaska Governor Tony Knowles agreed not to exceed the preseason quota of 230,000 fish as a conservation measure responding to concerns raised by the Canadian government. Because the troll fleet harvested less than the 70% of the remaining chinook quota after the initial opening, there was a second opening, from July 30 through August 5, during which 21,300 more chinook salmon were harvested.

Following this second fishery, approximately 55,000 chinook remained to be harvested based on a 170,100 treaty fish troll target. On August 4, the Confederated Tribes and Bands of the Yakima Nation et al. (tribes) sued the State of Alaska in District 9 Federal Court. The tribes claimed that the proposed harvest by Alaska was not negotiated properly under the provisions of the PST and that the harvest level proposed by Alaska was too high. The tribes motioned for a temporary restraining order on the Southeast Alaska chinook fishery under the *Baldrige Stipulation*, a 1985 court ruling through which tribes sought Alaskan compliance with the allocation obligations of chinook salmon resources under the Stevens and Palmer Treaties of the mid-1850s. On August 11, 1995, Judge Barbara Rothstein granted this request and issued a temporary restraining order on further chinook salmon fishing, pending further review. On September 7, after a second court hearing on the matter, Judge Rothstein extended the tribes' motion for a preliminary injunction, and the chinook fishing ban was extended through the end of the season, September 30. Judge Rothstein did allow a 2,000 chinook salmon allowance for the recreational harvest from August 11-September 30.

Consequently, the 1995 chinook salmon all-gear fishery harvest totaled 231,000 fish (Table 3). The commercial catch was 186,000 fish (80.5%), and the recreational catch was 45,000 fish (19.5%). The Alaskan hatchery chinook contribution was estimated at 65,700 fish (56,700 fish add-on). The 1995 total commercial harvest of chinook salmon consisted of a troll harvest of 138,100 fish, a purse seine harvest of

25,100 fish greater than five pounds, a drift gillnet harvest of 13,300 fish, a set gillnet harvest of 9,400 fish, and a commercial all-gear catch of 133 fish in the Annette Island Reserve.

Winter Troll Fishery:

The 1995 winter troll season began October 11, 1994, and ended April 14, 1995. Areas open during the 1994-1995 winter season were restricted to areas of Southeast Alaska lying east of the surfline and the waters of Yakutat Bay. Outer coastal areas, including the EEZ, were closed during the winter fishery.

Under the Board of Fisheries (BOF) management plan, the winter fishery remains open until either a catch ceiling of 45,000 chinook salmon is harvested, or through April 14. Only 17,900 chinook salmon (representing 13% of the 1995 troll chinook catch) were taken during the 1994-1995 winter season (Table 4). This catch was the lowest since 1982. The low catch was a result of decreased effort due primarily to poor weather and a lower catch per unit effort than in previous years.

Experimental Fisheries:

In 1995, experimental troll fisheries started in late May, and all areas were open by the second week of June (Figure 2.). The purpose of the experimental fisheries is to target Alaska-origin hatchery chinook salmon, except in the Cross Sound fishery, which is designed to target chum and pink salmon. The experimental areas are adjacent to the Little Port Walter Hatchery (NMFS), Whitman Lake Hatchery and Carroll Inlet release site (Southern Southeast Regional Aquaculture Association, SSRAA), Crystal Lake Hatchery (ADF&G), Earl West Cove Release Site (SSRAA/ADF&G), and the Medvejie and Hidden Falls Hatcheries (Northern Southeast Aquaculture Association, NSRAA).

Fishing areas are determined prior to the fishing season and are initially opened for two days per week (Monday and Tuesday). Fish deliveries to the processors are examined by department personnel, and the heads from adipose fin-clipped fish are removed and shipped immediately to the state coded wire tag lab in Juneau. Information derived from the coded wire tags (CWT's) is provided to fisheries managers and used inseason to estimate the catch attributable to Alaska-hatcheries. Fishing time in the following weeks is then determined based on the Alaska-hatchery contribution and historic catch timing data for each area. Fishing time may be extended during any given week as more tag data and catch information becomes available from both the current and previous weeks.

Between 72 and 266 boats participated each week in the 1995 experimental fisheries, harvesting an experimental fishery record of 21,700 chinook salmon (Table 5). The highest catches were in the Silver Bay area (9,400 fish), followed by the Hidden Falls area (5,200 fish), and the newly established Middle Island area (2,500 fish). The record catch was primarily the result of large returns of chinook salmon to the Hidden Falls and Medvejie Hatcheries. In the Cross Sound pink and chum salmon experimental fishery area (District 114), 18,900 pink and 14,900 chum salmon were harvested, along with 410 chinook salmon.

Terminal Troll Fisheries:

Terminal fishery areas contributed about 1,300 chinook salmon to the overall chinook troll catch in 1995 (Table 5).

General Summer Season:

The general summer season troll harvest target was determined by subtracting the base catches in the winter and June troll fisheries from the yearly catch ceiling. Five percent of this harvest target was added for the expected Alaska hatchery contribution.

Since 1984, the catch and Alaskan hatchery add-on have been monitored inseason by the department's fisheries performance data program (FPD). This consists of confidential interviews with trollers to obtain detailed catch per unit effort data (CPUE, in numbers of fish per fishing day) and an inspection of troll catches for adipose-clipped fish, which may indicate the presence of a coded wire tag. Total catch is estimated by combining vessel counts obtained during weekly overflights with the CPUE obtained from the interviews.

In 1995, 151,000 chinook salmon remained in the quota after the winter and experimental fisheries, with the abundance of chinook salmon expected to be lower than in recent years. Therefore, the troll fishery was open for a set period of ten days (July 1-10), resulting in a harvest of 76,000 chinook salmon (7,600 fish per day). With 75,000 chinook salmon remaining in the quota, seven more days of chinook fishing were allowed from July 30-August 5. The areas of high chinook salmon abundance (described in 5AAC 33.312(c)(1)-(5), were closed to moderate the harvest rate. A total of 21,300 chinook salmon were harvested in this period. Following the second general summer opening, a Federal District Court temporary restraining order closed the chinook fishery for the remainder of the season. This resulted in 17 total days of chinook fishing and a record low general summer season chinook catch of 97,000 fish (Table 6).

Fishing effort during chinook retention (CR) periods has declined from a high of 76,752 boat days in 1981. However since the low of 2,882 boat days in 1992 the effort has shown an upward trend (Table 7). Conversely, during chinook non-retention (CNR) periods, effort has generally shown an increasing trend from 3,526 boat days in 1981 to a high of 38,424 boat days in 1989. In 1995, CR and CNR effort was estimated at 7,048 and 24,705 boat days, respectively. Effort data was derived from dockside interviews of trolling vessels in conjunction with catch and effort data from troll fish tickets (John K. Carlisle, ADF&G, personal communication).

Net Fisheries:

The Alaska Board of Fisheries established a guideline harvest level (GHL) of 20,000 chinook salmon, not including fish produced by Alaskan hatcheries, for drift gillnet (7,600), set gillnet (1,000), and purse seine (11,400) fisheries in Southeast Alaska. In 1995, a total of 38,500 large chinook salmon were harvested in Southeast Alaska drift gillnet and purse seine fisheries, of which 24,400 were non-Alaskan hatchery fish. The 1995 total was greater than the 1994 total of 31,600 fish, and the non-Alaska hatchery total was also

greater than the 1994 hatchery total of 13,200 chinook salmon. The set gillnet fishery harvested 9,400 chinook salmon in 1995. Very few hatchery produced fish were reported caught in the Yakutat set gillnet fishery.

The 1995 purse seine catch of chinook salmon totaled 26,795 fish of which 25,109 fish were reported as 28 inches or larger and 1,686 fish less than 21 inches (jacks). Of the large chinook, 16,942 fish were Alaska hatchery produced fish (100 harvested in the general common property fisheries and 16,842 fish in the hatchery terminal area fisheries) which do not count against the seasonal harvest guideline. When both the catch of small chinook and hatchery-produced chinook salmon are considered, the 1995 season seine harvest of chinook salmon was 3,233 fish below the harvest guideline of 11,400 fish.

The 1995 drift gillnet landings of chinook salmon totaled 13,464 fish. Of these, 7,454 were Alaska hatchery produced fish (3,784 terminal area, and 3,670 common property harvest fish) that did not count against the seasonal harvest guideline. As a result, the total drift gillnet harvest was roughly 1,590 fish below the 7,600 fish harvest guideline.

Recreational Fisheries:

Postseason estimates of the total recreational harvest in Southeast Alaska are obtained through an annual Statewide Harvest Postal Survey of sport license holders. The 1994 estimated harvest for Southeast Alaska recreational fisheries was 42,365 chinook salmon (Table 8). The final 1995 recreational harvest estimate is not yet available. However, a preliminary estimate of 45,100 fish was determined based on creel survey monitoring programs with an estimated 14,000 fish (31% of total) originating from Alaska hatcheries. The BOF increased the 1995 allocation to the recreational fishery from 18% to 19% of the Southeast Alaska chinook quota after the 20,000 fish allocated to net fisheries are removed. The only regional management action taken during 1995 was a reduction in the bag limit to 1 chinook salmon 28 inches or more in length from August 17 through October 3 in response to a court order which limited total marine sport fishery catches to 2,000 chinook salmon for the period running from August 11 through September 30.

About 79% of the 1995 total recreational harvest of chinook salmon in Southeast Alaska was monitored through on-site creel survey or catch sampling programs conducted in the Ketchikan, Craig (Prince of Wales Island), Petersburg, Wrangell, Sitka, and Juneau areas (Table 9). The Medvejie hatchery contribution of over 5,000 chinook salmon to the recreational harvest was by far the largest, while the Hidden Falls Hatchery contributed an additional 1,600 chinook salmon. A number of other hatcheries contributed over 100 fish to the recreational harvest in the sampled marine boat fisheries. 36% or more of the recreational harvest in the Petersburg, Juneau, and Sitka fisheries originated in Alaska hatcheries.

C. Enhanced Production

Hatchery Releases:

The production of hatchery-produced, age-1 chinook salmon smolts in 1995 have continued the trend of decreasing numbers as seen in 1993 and 1994. There are several reasons for this. The conclusion of chinook production at Snettisham Hatchery in 1993 (now exclusively a sockeye salmon facility) combined with reduced production at the Neets Bay Hatchery and a lapse in production at the Port Armstrong hatchery (as it switches to a new brood line) are major factors. In 1996, however, this trend should reverse and hatchery production will increase dramatically as broodstock programs at Southeast Alaska chinook facilities reach their design production goals. The capital improvements to the Port Armstrong facility are completed and will support production and releases of 1.5 million smolts annually. Adding production numbers of this magnitude to the total area-wide production capabilities, should result in record Southeast Alaska hatchery smolt releases, though perhaps not at a level equaling the all-time high of 9.2 million smolts released in 1988. The release numbers of age-0 smolts is somewhat lower than the previous year, although 1996 should show a slight increase.

In 1995 the Tamgas Hatchery released 900,000 brood year (BY) 94 age-0 smolts (Figures 3 and 4; Table 10). The releases of BY93 age-1 smolts in 1995 marks the smallest group since the release of the BY86 age-1 smolts in 1988. As mentioned, this trend should reverse in 1996 (Table 10) initially showing a slight increase in release numbers which will in the following year, 1997, increase by nearly 20%. Releases of age-0 smolts are stable, hovering at 1,000,000 annually (Figure 3). Total releases (combination of BY93 age-1 and BY94 age-0 smolts) in 1995 equaled 5,857,600 smolts (Table 10), with the bulk of the production being age-1 smolts (Figure 3). The 1995 release is the smallest total release since 1985 when only 2,645,500 smolts were released. Actual and projected releases of hatchery-produced chinook salmon are shown by brood year in Figure 4. The projected releases of the 1995 brood shows that 5,962,600 will be yearling smolts which will be released in 1997, and 950,000 age-0 smolts, scheduled for release in 1996 (Table 10). It is not likely that released numbers of age-0 smolts will grow larger unless returns to the Tamgas Hatchery, from previously released age-0 smolts, indicate an improvement in historic survival.

Existing capacity for rearing yearling smolts should be reached at most facilities with production from eggs taken in 1996. Neets Bay Hatchery will resume releasing fish in 1996 after a one year hiatus as SSRAA re-evaluated its chinook program. The development of a new brood stock at Port Armstrong remains contingent on the availability of King Salmon River chinook eggs from Little Port Walter. Total smolt capacity for Southeast Alaska Hatcheries has been increased by 1,615,000 for the age-1 smolts primarily due to the completion of the Port Armstrong facilities as well as the inclusion of the production capabilities of the Sheldon Jackson and Burro Creek hatcheries (Table 10). The Tamgas Hatchery in Metlakatla remains the only hatchery in Southeast Alaska which includes an age-0 chinook salmon component in its production program.

Harvest of Hatchery Fish:

Starting in 1980 and up until 1991, the harvest of Alaska hatchery-produced chinook salmon grew in each succeeding year corresponding to the growth of hatchery programs (Table 11). From 1992 to 1994, however, the increase stopped and the harvest actually declined. The 1995 catch data shows this trend has reversed. The harvest increased dramatically, nearly doubling the 66,708 fish return recorded in 1994. The catch distribution among user groups changed from the previous year, particularly in the net fishery which nearly quadrupled its catch to almost equal the troll harvest. Estimated troll and recreational catches in 1994 were 26,187 and 9,983 chinook salmon, respectively. The trollers harvested a 117% more hatchery produced fish in 1995 than in 1994. Increased catches were also seen in the sport fishery, which showed a 64% increase. Troll and sport catches of Medvejie returns increased by 93% and 241%, respectively, from 1994 levels. Harvest by the seine and gillnet fleets was 22,506 fish in 1995 which is corresponds to an increase of 278% over the 1994 harvest. The 1995 harvest, though high, ranks only as the third highest on record. However, in terms of total Southeast Alaska hatchery produced fish, 1995 establishes a new record. (Table 11). When comparing harvest rates between the user groups, the percentage harvested by the troll fishery has declined from approximately 50% in the early 1980s to the 20% to 30% ranges experienced in more recent years (Figure 5). Undoubtedly, the shorter summer troll season, coupled with other changes in the conduct of the troll fishery, are responsible for part of this reduction.

The total adult harvests due to Southeast Alaska hatcheries was just over 112,000 fish in 1995 (Table 12). The exploitation rates for hatchery fish are very dynamic, in some cases fluctuating dramatically from year to year, although for the last two years they have remained relatively stable.(Table 13).

The distribution of hatchery-produced chinook salmon in the commercial troll fishery from 1980 through 1995 is shown in Table 14. Note that distributions of 20% or more are shaded on this table to illustrate the northern outside to southern inside distribution in the harvest. The distribution is expressed as the percentage of the total harvest in each Pacific Marine Fisheries Commission (PMFC) area. The PMFC areas are shown in Figure 6. The more northern hatcheries contribute primarily to the southern intermediate and central intermediate areas, while the southern hatcheries contribute more to the southern inside area. Most Alaska hatchery-produced chinook salmon are caught in inside waters, and because of the nature of the recreational fishery, sport fishers are able to harvest these fish at a greater rate than they do for non-Alaska hatchery and wild fish.

Disposition of BY 95 Eggs:

A total of 11,888,600 chinook salmon eggs were taken by hatchery operators in 1994: 11,823,600 from hatchery returns and 65,000 from wild stocks (Table 15). This is 2,809,900 more eggs than were taken in 1995. The difference is due to larger egg collections at most hatcheries. Wild stock egg numbers are somewhat lower than previous years and are not expected to increase in future years as there is only one project using wild stock eggs. No eggs were taken from the King Salmon, Farragut, Harding, or Tahini Rivers in 1995. Chinook salmon eggs taken at Boulder Creek are being used to rehabilitate that system through the use of an instream incubation system. In 1995 no wild stock donor systems were supplemented with fry produced in the hatcheries. The disposition and projected use of the eggs taken in 1995 is listed for

each facility in Table 16. The majority of chinook salmon eggs were from the Andrew Creek, Chickamin River, and Unuk River stocks (9,958,600 of the 10,544,600 taken). Andrew Creek stock continues to be the predominant stock used at Southeast Alaska Hatcheries, accounting for more than half (57%) of the total number of eggs taken in 1995. The successful development of other brood stocks continues to be important to ensure adequate genetic diversity of chinook salmon culture in the region. Currently, only two other stocks, King Salmon River and Tahini River, are currently being used to develop other hatchery brood lines in Southeast Alaska.

III. BROOD STOCK ALLOCATION

A. Brood Stock Development, Diversity, and Performance

The development of self-sustaining populations of chinook salmon at Southeast Alaska enhancement facilities continues. Just as in 1994 and 1995, four facilities will continue to need to import gametes to meet minimal brood requirements. The Medvejie and Gastineau Hatcheries are both in the process of changing brood stocks. Medvejie Hatchery will remain with the Andrew Creek stock; however, eggs will originate from Andrew Creek brood returning to the Hidden Falls Hatchery. Gastineau Hatchery is still in the process of changing from the Andrew Creek stock to the King Salmon River stock. The eggs will come from adults returning to Little Port Walter. The greatest demand for eggs is likely to take place at Little Port Walter where both Unuk and King Salmon River eggs will be needed for other facilities. Brood development at the Port Armstrong Hatchery program is still dependent on the availability of eggs from the King Salmon River stock which they will receive after the Gastineau Hatchery has received its full complement of eggs.

Though problems still remain with genetic diversity among chinook salmon hatcheries, progress continues to be made to expand the use of other brood types. As has historically been the case, a preponderance of the 1995 brood production of yearling smolts (92%) will originate from three stocks: Andrew Creek (63%), Unuk River (11%), and Chickamin River (18%). Other than the Andrew Creek and Unuk stocks, no other chinook salmon brood stocks are being used at more than three hatchery sites.

Dependence on only a few chinook stocks has been driven by the immediate need to produce at a maximum rate to match the rapid expansion of hatchery capacity in order to permit fishers to increase their harvests above the ceilings set by the PST as quickly as possible. The lack of stock diversity is recognized and progress towards the long-term goal of stock diversity continues to be made while current production is being maximized. The chinook salmon brood stock program based on the King Salmon River (on Admiralty Island) continues at the Little Port Walter Hatchery. Gastineau Hatchery received its first increment of 212,500 eyed eggs in 1993 followed by 429,000 in 1994, and 285,000 in 1995. There was not a surplus of King Salmon River stock eggs from Little Port Walter in 1995, however if there is an egg surplus in 1996, any eggs beyond the needs of the Gastineau facility will be transferred to the Port Armstrong Hatchery to initiate that program.

The Hidden Falls Hatchery is no longer developing the Tahini and Farragut River stocks. The small number of eggs available from wild stocks for brood stock development, coupled with high exploitation rates on returning chinook salmon caught incidentally in the terminal harvest of chum salmon, made it impracticable to continue the development of these chinook stocks. Two small facilities in upper Lynn Canal (Burro Creek and Jerry Myers Hatcheries) are developing the Tahini stock, though on a very small scale. The project to enhance the Farragut River stock has been concluded. A reassessment of the Harding River project (funded under the U.S./Canada Alaska Salmon Enhancement Program), resulted in a reallocation of a large portion of the project funding to other salmon enhancement projects. During the course of the project, several major setbacks made it unfeasible that this project would ever meet its goals. The loss of eggs to an infectious fish virus coupled with two major flooding events, which destroyed the camp instream incubators and made the river impassable to spawning adults, diminished the success of this project and resulted in the decision to conclude this project and a transfer the project balance.

B. Allocation Criteria

The allocation plan for distributing available eggs among potential users has remained virtually unchanged in recent years. Allocation becomes less necessary as ongoing programs become increasingly self-sufficient. This is now the case for the Unuk River, Chickamin River, and Andrew Creek stocks. The availability of Chickamin stock eggs is still in question as current production levels may not supply the needs of both of SSRAA's production facilities (Whitman Lake and Neets Bay). Demand will continue to be high for King Salmon River eggs until both the Gastineau and Port Armstrong Hatcheries have developed returns that are self-sustaining. The outlook for Port Armstrong indicates that developing a self sustaining run of King Salmon River brood return will be a very long term situation, perhaps not occurring until after the turn of the century.

Allocation of some stocks will continue to be necessary when the demand exceeds supply. Because some facilities receive less than a full complement of chinook salmon eggs, the allocation process can be sensitive and controversial. To reduce the potential for disputes arising from these situations, the planning team developed a set of policy statements to define the criteria used in structuring the allocation plan which first appeared in the 1987 and 1988 Annexes. These criteria are listed below:

1. First priority in the allocation of available chinook salmon gametes is to maximize benefits to the common property commercial and recreational fisheries.

2. Brood stock development has priority over production according to the following hierarchy:

    A. Brood stock at donor hatchery:

        1. First priority is to allocate sufficient brood to maintain the donor hatchery's capability to provide gametes to other programs.

    B. Brood stock at recipient hatcheries:

1. Requirement for brood stock is defined as sufficient gametes to provide return capable of meeting hatchery capacity based on standard assumptions or observed values for egg-smolt survival, smolt-adult survival, and fishery exploitation.

2. Existing programs have priority for allocation of brood stock relative to new programs. New programs are defined as facilities or agencies with no previous chinook salmon culture history; a program is considered *new* until it has demonstrated the capability to culture chinook salmon to smolt release.
3. Within each category (existing and new), eggs will be allocated in incremental lots. Order of allocation is dependent on historic use. Each facility will be allocated an increment; the allocation will be reiterated until brood stock needs are met.

C. Production:

1. Production at the donor hatchery has first priority.

2. Existing programs have priority for allocation relative to new programs. Performance of existing facilities as well as historical precedence will be considered in the allocation order for production purposes.

3. Within each category (existing and new), eggs will be allocated in incremental lots. Each facility will be allocated an increment; the allocation will be reiterated until production needs are met.

C. Allocation Increments

Allocation increments are an important component when implementing the criteria detailed above, as the size of the increments can affect the relative proportion of capacity a facility receives. No specific number has been defined for allocative increments; the planning team has elected to assign increments based on a review of a particular facility's predicted return and the magnitude of demand.

D. Allocation Plan

The following includes a listing of only those stocks and facilities for which exports of chinook salmon eggs or smolts are proposed:

1. Wild brood stocks:

A. Harding River. 1n 1995 a decision was made to transfer nearly all of the monies remaining in the project to other salmon enhancement activities. This decision was in a large part driven by changes to the hydraulics of the river resulting from a flooding event that occurred in 1993. Movement of large rocks by the flood waters has made the river impassable to the natural

upstream movement of adult chinooks. The project goal of establishing a self-perpetuating run of chinooks is not possible as long as the barrier remains in place. There are currently no plans to "fix" the river, which would probably require the use of explosives. A small balance of funding remaining after camp demobilization will be used to fund a plan to capture adult chinooks and coho below the barrier and transport them by helicopter to an area above the barrier. This should result in some of the returning fish spawning in the upper reaches of the river. Tentatively set for the fall of 1996, this project will be a cooperative effort between the U.S. Forest Service and the Alaska Department of Fish and Game.

B. **Farragut River**. No further egg takes are planned from the Farragut River. Studies by ADF&G limnologists have continued in an effort to determine the impacts of chinook fry plants in 1992, 1993, and 1994 upon plankton of Farragut Lake.

C. **Chilkat River**. Up to 12 females may be taken from Big Boulder Creek for incubation in 1996. Eggs will be incubated in a stream-side incubator at Big Boulder Creek. The fry will naturally emigrate into the creek in the spring. All of the Big Boulder Creek fry will be tagged with CWTs to enable evaluation of migration patterns and harvest rates. Wild chinook salmon eggs will no longer be taken from the Tahini River for brood stock development at the Jerry Myers and Burro Creek Hatcheries. Projected returns to the Jerry Myers Hatchery in 1995 should provide the necessary eggs.

2. **Hatchery brood stocks:**

A. **Crystal Lake Hatchery (Andrew Creek stock).** Expected egg availability — 1,500,000.

The brood stock development allocation for Andrew Creek brood from Crystal Lake is to be shared between the hatchery and SSRAA's Earl West Cove release site. A target of 900,000 smolts resulting from these eggs will be released from two sites. Five-hundred thousand smolts will be released from the hatchery into Blind Slough. The balance, up to a release number of 400,000 smolts, will be transported to the SSRAA Earl West Cove facility for saltwater rearing and release. In 1996, Crystal Lake Hatchery will receive Chickamin River eggs from Whitman Lake which will be incubated and reared at Crystal Lake. The Chickamin smolts will then be transferred to Neets Bay Hatchery for release.

B. **Port Armstrong Hatchery.** Expected egg availability — No egg take is planned.

To date the program to increase chinook salmon production, as well as develop a new chinook broodstock at the Port Armstrong facility, has been limited to the transportation of smolts from Snettisham to Port Armstrong in 1992 and 1993 for short-term rearing and release. No chinook eggs have been taken from returning adults since 1992. This has resulted in a clean break in chinook production, anticipating the time when Port Armstrong will switch over to the King Salmon River stock. No chinook salmon have been released from Port Armstrong since 1993. In the interim, hatchery production will target coho. Initiating the chinook program in 1997

continues to be dependent on the availability of King Salmon River brood returning to Little Port Walter. Gastineau Hatchery is the first to receive an increment of up to 700,000 eggs. Egg collections exceeding this number will be transferred directly to Port Armstrong from Little Port Walter for incubation, rearing, and release. The likelihood that there will be a surplus of eggs in 1997 is very slim. The project is now delayed by two years with prospects of further delays. At this rate, it will not be until sometime after the turn of the century that all eggs taken at Port Armstrong will come from a self propagating brood.

C. **Hidden Falls Hatchery.** Expected egg availability — 3,250,000 Andrew Creek stock.

The production goal for chinook salmon is now 1,100,000 chinook smolts. Approximately 1,750,000 million chinook eggs will be needed to reach this goal. Up to 1,500,000 additional eggs will be taken at Hidden Falls for the Medvejie Hatchery.

The Tahini River stock is no longer under development at Hidden Falls. More than 50 adults returned in 1995. In the 1988 Annex, the Chinook Salmon Planning Team recommended that the Tahini River stock be moved off-site in order to reduce the problems and costs associated with chinook salmon stock separation at a production chum salmon hatchery. The Chinook Salmon Planning Team agreed with NSRAA's position that it was unlikely the Tahini stock can be successfully developed at Hidden Falls. Therefore, the team supported the transfer of this stock to the Burro Creek and Jerry Myers Hatcheries.

D. **Medvejie Hatchery.** Expected egg availability — No egg take is planned.

All returning chinook adults will be harvested. 1,500,000 eggs of Andrew Creek stock will be taken at Hidden Falls Hatchery and transported to Medvejie for incubation and release.

E. **Gastineau Hatchery.** Expected egg availability — up to 640,000 Andrew Creek stock.

King Salmon River stock has been the brood of choice for Gastineau Hatchery since 1993. Eggs collected from Andrew Creek stock returning to the facility will be available for use at other hatcheries. Up to 640,000 eggs will be taken as a contingency should the King Salmon River egg-take goal not be met. The King Salmon River stock will be supplied from Little Port Walter on an annual basis until approximately 1998.

F. **Little Port Walter. Expected egg availability: — 2,200,000 Unuk River, 1,650,000 Chickamin River, and 550,000 King Salmon River.**

Little Port Walter remains the major source of chinook eggs for developing new broodstocks at several hatcheries in Southeast Alaska. Chickamin and Unuk River chinook eggs, from hatchery stocks, are to be used to meet the production needs at the Little Port Walter, Neets Bay, and Whitman Lake Hatcheries. Little Port Walter is also the source of King Salmon River Chinook

eggs for other facilities. The first increment of 50,000 eyed eggs from the King Salmon River stock will be retained at Little Port Walter to continue the brood development. Additional King Salmon River eggs will be distributed among the two recipient facilities, depending on the actual number available. Replacing the Andrew Creek stock at Gastineau Hatchery is still the priority use of these eggs. Any increments of King Salmon River eggs above the permitted capacity at Gastineau will go to Port Armstrong. The intent is to replace all releases of the Andrew Creek stock in the Juneau area as soon and as completely as possible and to minimize the need to decode tags at Gastineau Hatchery during spawning. The Port Armstrong Hatchery will continue to backfill its underutilized incubation and rearing facilities with coho salmon until sufficient King Salmon River eggs are available from the Little Port Walter Hatchery or the Gastineau Hatchery.

Stock	Facility	Allocation
Unuk	Little Port Walter	200,000
	Crystal Lake Hatchery	750,000
Chickamin	Little Port Walter	250,000
King Salmon River	Little Port Walter	50,000
	Gastineau (DIPAC)	700,000
	Port Armstrong	Remainder

G. **Whitman Lake.** Expected egg availability: — 1,850,000 Carrol River/Chickamin River stock.

Eggs are to be used to meet SSRAA's needs at Whitman Lake and Neets Bay. Egg numbers to provide a 400,000 smolt release at the Neets Bay Hatchery will be first be transferred to Crystal Lake Hatchery for incubation then moved to Neets bay for release as age -1 smolts.

H. **Neets Bay.** Expected egg availability: — No egg takes are planned.

Eggs for Neets Bay will be collected at the Whitman Lake Hatchery, continuing the program to switch to a Chickamin brood stock. All returning adults to Neets Bay will be harvested for cost recovery. Additional future chinook production at Neets Bay will involve approximately 400,000 Andrew Creek chinooks which will be reared in saltwater net pens prior to release as age-1 smolts.

I. **Deer Mountain**. Expected egg availability: — 133,000 Unuk River stock.

Chinook production at this facility continues to target smolt releases from the facility of 100,000 annually. All eggs will be collected from returning brood and incubated and released at the hatchery.

IV. HATCHERY RETURN PROJECTION PROCESS

Each year hatchery operators are asked to predict the number of returning chinook salmon expected to return to hatchery facilities in Southeast Alaska. These preseason projections include total return, number of fish expected to be harvested in traditional and terminal fisheries, and number needed for brood stock. There are no standardized procedures for making such projections, and the inaccuracy inherent in predicting future events has resulted, in some years, in substantial differences between the prediction and actual harvest.

Some of the techniques used to predict future chinook salmon returns are described below. As more facilities establish databases to work from, it may be possible to refine techniques or to apply them to more than one facility. However, with the location and stock-specific differences already evident among facilities, it may never be possible to completely standardize projection methods.

A. Predictive Model for Little Port Walter Chinook Salmon Returns

The Little Port Walter facility uses a dual-model approach for predicting year-class strength of chinook salmon in fisheries and in returns to the hatchery. The first model is an overall survival estimator for each brood year based on a linear-regression prediction using the square root-transformed percent survival of recoveries of 0-ocean-age mini-jacks at the Sashin Creek weir as an independent predictor variable (mini-jack survival is not included in the total). To date the model is based on 38 tag codes from eight complete brood years and has an R^2 value of 77%. No other predictor variables are used with the model.

The second model is more of a synthesis of previous years' returns and distribution rates and sex ratios at the weir than it is a formal model. This analysis predicts percent returns for a given cohort in a given year based on the previous year's data combined with the historic ratios between age classes.

B. Crystal Lake Hatchery Chinook Salmon Return Predictive Model

During the year preceding the target year, the initial prediction for chinook salmon returns in the target year is based on historic age-class fractions of each brood year. Numbers of age-1.2 and age-1.3 fish returning in the year preceding the target year are used as predictors. The model is "fine-tuned" after the strengths of these fish are determined in the winter fishery of the target year.

C. Deer Mountain Hatchery Chinook Salmon Return Predictive Model

Predictions are based on the same technique used for predicting the Crystal Lake Hatchery run, with the exception that information from the winter fishery is not used.

D. Predictive Model for SSRAA Hatchery Returns

SSRAA employs a synthesis of previous year's return and distribution information similar to that for Little Port Walter to predict returns for the subsequent year at the Whitman Lake and Neets Bay Hatcheries. The analysis predicts percent return for a given cohort in a given year based on the previous year's data combined with the historic ratios among age classes. The distribution between fishery and rack components of the run is based on the most recent 3-year average.

E. Predictive Model for NSRAA Hatchery Returns

A great deal of effort goes into regular sampling of the chinook return each year to NSRAA facilities to be able to generate accurate estimates of age at return. These estimates are used to develop historic relationships between age at return for each hatchery and to predict returns using partial return information to estimate remaining age classes.

V. CHINOOK PLANNING TEAM MEETING

The Chinook Planning Team met in Douglas, Alaska on March 12, 1996. In a marked departure from past meetings, in which team members generally relate the production goals and program trends of their associated facilities to the other members, virtually the entire meeting was dedicated to presentations from the departmental heads of the fish genetics laboratory, the fish pathology laboratory, and the coded wire tag laboratory. Discussions and questions followed which concerned not only the presentations but a wide range issues facing enhanced salmon culture not only in Alaska but in the larger world wide arena.

The meeting began with recap of the previous meeting followed by a short discussions on the status of the PST talks and the expected effects of the negotiation impasse on Southeast Alaska fisheries in 1996. After a break, a long awaited presentation by the ADF&G geneticist, Dr. Jim Seeb began. Focusing on the genetic maintenance of cultured chinook stocks, Dr. Seeb gave an overview of genetics and genetic drift. Perhaps the most compelling issue presented in this presentation was the idea that long held beliefs concerning reintroduction of wild stock genetic material into established hatchery populations (by using sperm collected from males at the original donor system) to maintain genetic diversity, may not always be desirable or the most prudent thing to do. In specific cases, (an established hatchery run with good survival to adults coupled with a lack of straying), back breeding may not provide the benefits sought. Good performance of a hatchery stock indicates that the population may in fact have become the best suited to the conditions at the hatchery. Introduction of wild-stock genetic material may in fact reduce the fitness of this particular stock for this specific location. As might be expected, this information was well received for it has been unclear as to when to back breed and at what level. Additionally, it is quite expensive for hatchery operators to return to a remote location to collect the genetic material.

Dr. Ted Meyers made a presentation reinforcing the need to practice good fish culture techniques by maintaining a clean environment for the salmon under culture as well as a rigorous hatchery disinfection regime to prevent cross-contamination within the hatchery population. Screening of broodstock as well as

monitoring the fish constantly, responding quickly to behavior or mortality not normally seen, also increases the ability of the staff to maintain healthy hatchery stocks.

The final presentation was made by Karen Crandall from the Coded Wire Mark/Tag Lab. Karen reinforced the need to practice a good methodology when tagging hatchery stocks. The information is only good if the fish are tagged properly and the records are well kept. Karen also informed the group of the status of the new computer and data base system at the tag lab which will allow tag records to be accessed state wide. Currently the hardware is in place, but the database is still being finalized.

VI. CHINOOK PLANNING TEAM RECOMMENDATIONS

The Chinook planning team members agreed that a document, very similar to the Chinook Annex, for coho, be developed and distributed. Gary Freitag of SSRAA volunteered to initiate the development of this document.

Table 1. Estimates of total escapements of chinook salmon to escapement indicator systems and to Southeast Alaska and Transboundary (T) rivers, 1981-1995. Index escapements are expanded for survey counting rates and unsurveyed tributaries.

	MAJOR SYSTEMS				MEDIUM SYSTEMS										MINOR SYSTEMS			TOTAL
Year	Alsek[a] (T)	Taku (T)	Stikine (T)	Major Subt.	Situk	Chilkat[b]	Andrew	Unuk (T)	Chick-amin(T)	Blos-som	Keta	Behm Subt.	Medium Unsurv.	Medium Subt.	King Salm.	Minor Unsurv.	Minor Subt.	ALL SYSTEMS
1981	2,837	25,856	26,672	55,365	702		536	2,924	1,536	398	823	5,680	3,459	10,377	144	3,024	3,168	68,910
1982	3,078	12,810	22,640	38,528	434		672	5,404	2,284	863	1,885	10,436	5,771	17,312	366	7,694	8,061	63,901
1983	3,352	5,621	4,752	13,725	592		366	4,500	2,398	1,473	2,055	10,425	5,692	17,075	245	5,145	5,390	36,190
1984	2,038	10,748	10,352	23,138	1,726		389	7,348	4,408	1,270	1,525	14,551	8,333	24,999	265	5,565	5,830	53,967
1985	1,853	19,580	12,456	33,889	1,521		640	4,736	3,824	1,773	1,560	11,893	7,027	21,080	175	3,675	3,850	58,819
Average	2,632	14,923	15,374	32,929	995		521	4,982	2,890	1,155	1,570	10,597	6,056	18,169	239	5,021	5,260	56,357
1986	3,966	20,231	11,564	35,761	2,067		1,414	8,504	6,980	3,195	1,725	20,404	11,942	35,827	255	5,355	5,610	77,198
1987	3,598	15,530	19,132	38,260	1,884		1,576	7,892	3,900	3,373	1,920	17,085	10,272	30,817	196	4,116	4,312	73,389
1988	2,891	23,334	29,168	55,393	885		950	6,984	3,144	960	1,438	12,526	7,180	21,541	208	4,368	4,576	81,510
1989	3,399	25,481	18,860	47,740	652		1,060	4,596	3,736	860	2,888	12,080	6,896	20,687	240	5,040	5,280	73,707
1990	2,722	32,622	17,568	52,912	676		1,328	2,364	2,256	643	1,515	6,778	4,391	13,172	179	3,759	3,938	70,022
Average	3,315	23,440	19,258	46,013	1,233		1,266	6,068	4,003	1,806	1,897	13,774	8,136	24,409	216	4,528	4,743	75,165
1991	3,165	27,318	18,024	48,507	878	5,897	800	2,620	1,948	598	680	5,846	3,834	17,255	134	2,814	2,948	68,710
1992	1,950	30,142	26,508	58,600	1,580	5,284	1,556	3,496	1,384	375	543	5,798	4,062	18,280	99	2,079	2,178	79,058
1993	4,811	36,208	45,796	86,815	899	4,472	2,120	4,272	1,556	758	905	7,491	4,280	19,262	280	5,880	6,160	112,237
1994	5,532	26,804	25,800	58,136	1,270	6,795	1,144	2,844	1,552	403	765	5,564	4,221	18,993	224	4,704	4,928	82,057
1995	8,545	23,861	13,036	45,442	4,356	4,404	686	3,088	1,424	543	438	5,492	4,268	19,206	155	3,259	3,414	68,062
Average	4,801	28,867	25,833	59,500	1,797	5,370	1,261	3,264	1,573	535	666	6,038	4,133	18,599	178	3,747	3,926	82,025
Goals	Under review	Under review	Under review			Under review	Under review								Under review			
Lower Goal					600			2,800	1,680	600	600							
Point Goal	7,300	36,515	21,200	65,015	600	2,000	750	3,500	2,100	750	750	7,100	2,986	13,436	250	5,250	5,500	83,951
Upper Goal					750			5,600	3,360	1,200	1,200							

[a] Using CTC calculations of Alsek Escapement: Escapement = (weir count/0.64)-sport and IFF harvest.

[b] Chilkat goal under review, counts based on m-r estimates, medium systems total revised when Chilkat estimates available.

Table 2. Annual Southeast Alaska commercial and recreational chinook salmon harvests and Alaska hatchery contributions, in thousands of fish, 1965-1995.

Year	Commercial Fisheries			Recreational		Alaska	Total
	Troll[a]	Net[b]	Subtotal	Fisheries[c]	Total[d]	Hatchery Harvest	Less AK Hatchery
1965	309	28	337	13	350		
1966	282	26	308	13	321		
1967	275	26	301	13	314		
1968	304	27	331	14	345		
1969	290	24	314	14	328		
Ave. 1965-69	292	26	318	13	332		
1970	305	18	323	14	337		
1971	311	23	334	15	349		
1972	242	44	286	15	301		
1973	308	36	344	16	360		
1974	322	24	346	17	363		
Ave. 1970-74	298	29	327	15	342		
1975	287	13	300	17	317		
1976	231	10	241	17	258		
1977	272	13	285	17	302		
1978	375	25	400	17	417		
1979	338	28	366	17	383		
Ave. 1975-79	301	18	318	17	335		
1980	304	20	324	20	344	7	337
1981	249	19	268	21	289	2	287
1982	242	48	290	26	316	1	315
1983	270	19	290	22	312	2	310
1984	236	32	268	22	290	5	285
Ave. 1980-84	260	28	288	22	310	3	307
1985	216	35	252	25	276	14	263
1986	238	22	260	23	283	18	265
1987	243	15	258	24	282	24	258
1988	231	21	253	26	279	30	249
1989	236	24	260	31	291	34	257
Ave. 1985-89	233	23	257	26	282	24	258
1990	288	27	315	51	367	62	305
1991	264	32	295	60	355	70	285
1992	184	31	215	44	260	45	215
1993	226	28	254	49	304	39	271
1994	186	35	221	40	270	38	232
Ave. 1990-94	230	31	260	49	311	51	262
1995	138	48	186	45	231	66	165

[a] Troll catches prior to 1980 are reported by calendar year. From 1981-1990, catches are for the catch accounting year, October 1 to September 30.

[b] Purse seine chinook catches reported under net fisheries for 1986-91 do not include chinook less than five pounds reported on fish tickets.

[c] Estimates of recreational catches for 1965-76 based on 1977-80 average catch per capita data. Recreational catches for 1977 to 1993 based on statewide postal harvest surveys. The recreational harvest for 1994 is based on preliminary creel survey data, pending compilation of statewide postal harvest surveys.

[d] Total reported catches do not include approximately 200 to 400 chinook harvested annually by native food fisheries in several rivers.

Table 3. Estimated harvest and Alaskan hatchery add-on of chinook salmon by commercial and recreational fisheries in Southeast Alaska, 1995.

Fishery	Total Catch	Common Property Catch	Alaska Hatchery Total Contribution				Base Catch
			General Fisheries	Terminal	Subtotal	Add-on	
Net Fisheries							
Seine[a]	25,108	374	100	16,842	16,942	14,615	10,493
Gillnet	13,449	8,893	3,670	3,784	7,454	6,430	7,019
Setnet	9,374	9,374	0	0	0	0	9,374
Total Net	47,931	18,641	3,770	20,626	24,396	21,045	26,886
Annette Island Catches							
Seine	11	11	17	0	17	15	0
Gillnet	122	122	47	0	47	41	81
Troll	0	0	0	0	0	0	0
Trap	0	0	0	0	0	0	0
Total Annette Is.	133	133	64	0	64	55	81
Winter Troll Fishery							
Oct. 1 - Dec. 31	10,382		1,263	0	1,263	1,089	9,293
Jan. 1 - Apr. 14	7,486		866	0	866	747	6,739
Total Winter	17,868		2,129	0	2,129	1,837	16,031
June Troll Fishery							
Experimental	21,735		13,982	0	13,982	12,061	9,674
Terminal	1,337		0	1,337	1,337	1,153	184
Total June	23,072		13,982	1,337	15,319	13,215	9,857
Summer Troll Fishery							
Jul. 1-10	75,846		8,142	0	8,142	7,024	68,822
Jul. 29 - Aug. 5	21,269		1,580	0	1,580	1,363	19,906
Total Summer	97,115		9,722	0	9,722	8,386	88,729
Totals							
Total Net	47,931		3,770	20,626	24,396	21,045	26,886
Annette Island	133		64	0	64	55	78
Total Troll	138,055		25,833	1,337	27,170	23,438	114,617
Sport Fishery[b]	45,123		13,024	1,000	14,024	12,097	33,026
Grand Totals	231,242		42,691	22,963	65,654	56,635	174,607
		Risk factor + 5,000 Pre-treaty Fish			56,635		
		Alaska Hatchery Add-on			4,019		

[a] Seine catches do not include chinook salmon weighing less than five pounds.

[b] Sport fishery totals preliminary pending results of statewide harvest survey.

Table 4. Southeast Alaska winter troll fishery vessel landings, chinook salmon catches[a], and comparison with total season chinook catches, 1980- 1995.

	EARLY WINTER[b] POWER TROLL			LATE WINTER[c] POWER TROLL			EARLY WINTER HAND TROLL			LATE WINTER HAND TROLL			TOTALS		
Year	Number Chinook	Vessel Landings	Chinook per land	Number Chinook	Vessel Landings	Chinook per land	Number Chinook	Vessel Landings	Chinook per land	Number Chinook	Vessel Landings	Chinook per land	Winter Total	Percent	Annual Total
1980	2,577	171	15.1	2,486	133	18.7	1,425	357	4.0	1,210	292	4.1	7,698	2.5	303,732
1981	1,000	78	12.8	5,938	409	14.5	737	201	3.7	1,804	417	4.3	9,479	3.8	248,618
1982	3,156	217	14.5	6,083	511	11.9	1,709	318	5.4	1,500	309	4.9	12,448	5.1	242,236
1983	9,698	581	16.7	15,525	1,011	15.4	2,819	345	8.2	3,014	504	6.0	31,056	11.5	269,717
1984	11,792	825	14.3	14,780	1,393	10.6	2,431	392	6.2	2,983	620	4.8	31,986	13.6	235,444
1985	11,631	628	18.5	6,219	636	9.8	2,604	388	6.7	1,869	504	3.7	22,323	10.3	215,975
1986	13,338	746	17.9	4,934	540	9.1	3,390	454	7.5	1,203	290	4.1	22,865	9.6	237,548
1987	15,146	871	17.4	8,850	715	12.4	3,404	532	6.4	1,225	279	4.4	28,625	11.8	242,667
1988	38,243	1,568	24.4	13,488	1,299	10.4	6,531	1,058	6.2	2,076	477	4.4	60,338	26.1	231,313
1989	20,630	1,598	12.9	8,009	973	8.2	3,796	756	5.0	1,863	429	4.3	34,298	14.5	235,938
1990	15,089	754	20.0	12,975	1,020	12.7	2,525	373	6.8	2,537	456	5.6	33,126	11.5	287,897
1991	17,711	752	23.6	20,314	1,505	13.5	2,209	342	6.5	2,405	530	4.5	42,639	16.2	263,888
1992	24,793	1,376	18.0	39,790	2,071	19.2	3,484	576	6.0	3,783	607	6.2	71,850	39.1	183,990
1993	18,579	983	18.9	38,603	1,890	20.4	1,696	227	7.5	3,846	476	8.1	62,724	27.7	226,832
1994	33,462.	983	34.0	19,806	1,277	15.5	1,731	149	11.6	1,369	221	6.2	56,368	30.3	186,199
1995	9,662	505	19.1	6,665	699	9.5	720	137	5.3	821	172	4.8	17,868	12.9	138,108

[a] Catches are by troll accounting year (October 1 - September 30).

[b] Early winter troll = October 1 - December 31.

[c] Late winter troll = January 1 - April 14.

Table 5. The number of salmon harvested and permits fished in the 1995 experimental and terminal troll fisheries.

Experimental Areas	Dates	Week	Days	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total	% Alaska Hatchery Chinook
Gravina Island	05/30- 05/31	22	2	1	6	0	0	0	0	6	0%
101-29	06/05- 06/06	23	2	7	18	0	0	1	0	19	78%
	06/12- 06/13	24	2	9	113	0	0	0	0	113	31%
	06/19- 06/23	25	5	13	89	1	32	2	17	141	18%
	06/26- 06/28	26	3	8	76	2	96	229	42	445	22%
	Total:		**14**		**302**	**3**	**128**	**232**	**59**	**724**	**27%**
Mountain Pt.	05/22- 05/23	21	2	1	14	0	0	0	0	14	100%
101-45	05/30- 05/31	22	2	1	3	0	0	0	0	3	0%
	06/05- 06/06	23	2	3	21	0	0	0	0	21	86%
	06/12- 06/13	24	2	3	23	0	0	0	0	23	64%
	06/19- 06/23	25	5	6	69	1	6	4	4	84	65%
	06/26- 06/28	26	3	2	4	0	1	3	5	13	25%
	Total:		**16**		**134**	**1**	**7**	**7**	**9**	**158**	**59%**
Ship Is. Shore	05/30- 05/31	22	2	2	9	0	0	0	0	9	0%
102-80	06/05- 06/06	23	2	3	9	0	0	0	0	9	0%
	06/12- 06/13	24	2	4	73	0	0	0	0	73	27%
	06/19- 06/23	25	5	9	185	0	29	0	13	227	41%
	06/26- 06/28	26	3	5	62	0	22	6	0	90	6%
	Total:		**14**		**338**	**0**	**51**	**6**	**13**	**408**	**30%**
Steamer Pt.	05/30- 05/31	22	2	5	20	0	0	0	0	20	100%
106-30	06/05- 06/06	23	3	6	29	0	0	0	0	29	31%
	06/12- 06/15	24	4	11	138	0	1	0	0	139	48%
	06/19- 06/22	25	4	10	75	0	2	0	0	77	3%
	06/26- 06/28	26	3	3	28	0	5	0	0	33	0%
	Total:		**16**		**290**	**0**	**8**	**0**	**0**	**298**	**33%**

-Continued-

Table 5. (Page 2 of 7)

Experimental Areas	Dates		Week	Days	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total	% Alaska Hatchery Chinook
Snow Passage	05/30-	05/31	22	2	0	0	0	0	0	0	0	0%
106-41	06/05-	06/06	23	2	2	20	0	0	0	0	20	0%
	06/12-	06/13	24	2	0	0	0	0	0	0	0	0%
	06/19-	06/23	25	5	3	36	1	0	0	0	37	22%
	06/26-	06/28	26	3	0	0	0	0	0	0	0	0%
	Total:			**14**		**56**	**1**	**0**	**0**	**0**	**57**	**14%**
Baht Harbor	05/30-	05/31	22	2	0	0	0	0	0	0	0	0%
108-30	06/05-	06/06	23	2	4	12	0	0	0	0	12	0%
	06/12-	06/13	24	2	0	0	0	0	0	0	0	0%
	06/19-	06/20	25	2	1	1	0	0	0	0	1	0%
	06/26-	06/28	26	3	1	5	0	0	0	0	5	0%
	Total:			**11**		**18**	**0**	**0**	**0**	**0**	**18**	**0%**
Little Port	05/30-	05/31	22	2	2	7	0	0	0	0	7	29%
Walter	06/05-	06/06	23	2	1	4	0	0	0	0	4	0%
109-10	06/12-	06/13	24	2	0	0	0	0	0	0	0	0%
	06/19-	06/20	25	2	5	30	0	5	0	0	35	100%
	06/26-	06/28	26	3	15	84	0	252	15	3	354	33%
	Total:			**11**		**125**	**0**	**257**	**15**	**3**	**400**	**48%**
Beacon Pt.	05/30-	05/31	22	2	5	37	0	0	0	0	37	73%
110-13	06/05-	06/06	23	3	6	72	0	0	0	0	72	24%
	06/12-	06/15	24	4	13	185	0	0	0	1	186	45%
	06/19-	06/23	25	5	4	86	0	0	0	1	87	85%
	06/26-	06/28	26	3	6	27	0	1	0	4	32	4%
	Total:			**17**		**407**	**0**	**1**	**0**	**6**	**414**	**50%**

-Continued-

Table 5. (Page 3 of 7)

Experimental Areas	Dates	Week	Days	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total	% Alaska Hatchery Chinook
Big Creek	05/22- 05/23	21	2	18	133	0	0	0	0	133	60%
110-16	05/30- 05/31	22	2	7	53	0	0	0	0	53	15%
	06/05- 06/08	23	4	11	186	0	0	0	0	186	30%
	06/12- 06/13	24	3	6	81	0	0	0	1	82	16%
	06/19- 06/23	25	5	16	363	0	5	0	4	372	32%
	06/26- 06/28	26	3	5	54	0	3	0	0	57	0%
	Total:		**19**		**870**	**0**	**8**	**0**	**5**	**883**	**31%**
Cape Fanshaw	05/30- 05/31	22	2	11	172	0	0	0	0	172	23%
110-31	06/05- 06/08	23	4	20	578	0	0	0	0	578	84%
	06/12- 06/14	24	3	11	116	0	0	0	0	116	17%
	06/19- 06/23	25	5	10	261	0	2	0	1	264	88%
	06/26- 06/28	26	3	6	144	0	1	0	1	146	46%
	Total:		**17**		**1,271**	**0**	**3**	**0**	**2**	**1,276**	**66%**
Port Houghton	05/30- 05/31	22	2	3	49	0	0	0	0	49	31%
110-34	06/05- 06/06	23	2	1	12	0	0	0	0	12	42%
	06/12- 06/14	24	3	1	44	0	0	0	0	44	100%
	06/19- 06/23	25	5	2	49	0	0	0	0	49	31%
	06/26- 06/28	26	3	0	0	0	0	0	0	0	0%
	Total:		**15**		**154**	**0**	**0**	**0**	**0**	**154**	**51%**
Hidden Falls	05/30- 05/31	22	2	6	128	0	0	0	0	128	100%
112-22	06/05- 06/09	23	5	11	1,018	0	0	0	2	1,020	84%
	06/12- 06/16	24	5	36	2,259	2	0	0	72	2,333	88%
	06/19- 06/24	25	6	22	1,561	0	1	6	266	1,834	73%
	06/26- 06/28	26	3	4	228	0	1	2	29	260	11%
	Total:		**21**		**5,194**	**2**	**2**	**8**	**369**	**5,575**	**79%**

-Continued-

Table 5. (Page 4 of 7)

Experimental Areas	Dates		Week	Days	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total	% Alaska Hatchery Chinook
Silver Bay	05/22-	05/23	21	2	53	296	0	0	0	0	296	17%
113-35	05/30-	05/31	22	2	40	387	0	0	0	0	387	67%
	06/05-	06/09	23	5	77	1,920	0	0	0	1	1,921	63%
	06/12-	06/16	24	5	79	3,065	0	3	0	14	3,082	66%
	06/19-	06/23	25	5	86	2,657	0	17	1	32	2,707	74%
	06/26-	06/28	26	3	74	1,326	0	16	0	28	1,370	69%
	Total:			**20**		**9,355**	**0**	**36**	**1**	**75**	**9,467**	**66%**
Middle Island	06/05-	06/06	23	2	27	325	0	0	0	0	325	100%
113-41	06/12-	06/16	24	3	28	862	0	0	0	0	862	60%
	06/19-	06/25	25	5	46	968	0	3	0	1	972	30%
	06/26-	06/28	26	5	30	367	0	1	0	3	371	23%
	Total:			**15**		**2,522**	**0**	**4**	**0**	**4**	**2,530**	**48%**
Cross Sound	06/12-	06/14	24	3	22	69	244	0	871	2,169	3,353	
114-21	06/19-	06/21	25	3	33	197	390	2,284	2,069	4,305	9,245	
	06/26-	06/28	26	3	40	144	755	902	15,707	7,872	25,380	
	Total:			**9**		**410**	**1,389**	**3,186**	**18,647**	**14,346**	**37,978**	
Experimental Fishery			21		72	443	0	0	0	0	443	33%
Totals by Week			22		83	871	0	0	0	0	871	57%
			23		179	4,224	0	0	1	3	4,228	71%
			24		223	7,028	246	4	871	2,257	10,406	69%
			25		266	6,627	393	2,386	2,082	4,644	16,132	60%
			26		199	2,549	757	1,301	15,962	7,987	28,556	45%
	1995 Total:					**21,742**	**1,396**	**3,691**	**18,916**	**14,891**	**60,636**	**62%**

-Continued-

Table 5. (Page 5 of 7)

Terminal Areas	Dates		Week	Days	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Nakat Inlet	06/18-	06/24	25	2	No salmon harvested nor permits reported fished.						
101-10	06/25-	07/01	26	7							
	07/02-	07/08	27	7							
	07/09-	07/15	28	7							
	07/16-	07/22	29	7							
	07/23-	07/29	30	7							
	07/30-	08/05	31	7							
	08/06-	08/12	32	7							
	08/13-	08/19	33	7							
	08/20-	08/26	34	7							
	08/27-	09/02	35	7							
	09/03-	09/09	36	7							
	09/10-	09/16	37	7							
	09/17-	09/23	38	7							
	09/24-	09/30	39	7							
Carroll Inlet	05/18-	05/20	20	3	0	0	0	0	0	0	0
101-46	05/21-	05/27	21	7	0	0	0	0	0	0	0
	05/28-	06/03	22	7	0	0	0	0	0	0	0
	06/04-	06/10	23	7	1	4	0	0	0	0	4
	06/11-	06/17	24	7	3	7	0	0	0	0	7
	06/18-	06/24	25	7	4	44	0	1	0	2	47
	06/25-	06/26	26	2	2	57	2	4	0	4	67
		Total:				112	2	5	0	6	125
Wrangell Narrows	05/30-	06/03	22	5	16	89	0	0	0	0	89
106-44	06/04-	06/10	23	7	16	245	0	0	0	0	245
	06/11-	06/17	24	7	18	204	0	0	0	0	204
	06/18-	06/24	25	7	14	372	0	0	0	0	372
	06/25-	06/28	26	4	15	261	0	9	0	0	270
		Total:				1171	0	9	0	0	1,180

-Continued-

Table 5. (Page 6 of 7)

Terminal Areas	Dates		Week	Days	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Earl West Cove	06/15-	06/17	24	4	4	32	0	0	0	0	32
107-45	06/18-	06/24	25	7	1	24	0	0	0	0	24
	06/25-	07/01	26	7	0	0	0	0	0	0	0
	07/02-	07/08	27	7	0	0	0	0	0	0	0
	07/09-	07/15	28	7	0	0	0	0	0	0	0
	07/16-	07/22	29	7	0	0	0	0	0	0	0
	07/23-	07/29	30	7	0	0	0	0	0	0	0
	07/30-	08/05	31	7	0	0	0	0	0	0	0
	08/06-	08/12	32	7	0	0	0	0	0	0	0
	08/13-	08/19	33	7	0	0	0	0	0	0	0
	08/20-	08/26	34	7	0	0	0	0	0	0	0
	08/27-	09/02	35	7	0	0	0	0	0	0	0
	09/03-	09/09	36	7	0	0	0	0	0	0	0
	09/10-	09/16	37	7	0	0	0	0	0	0	0
	09/17-	09/23	38	7	0	0	0	0	0	0	0
	09/24-	09/30	39	7	0	0	0	0	0	0	0
	10/01-	10/06	40	6	0	0	0	0	0	0	0
		Total:			5	56	0	0	0	0	56
Deep Inlet		07/08	27	1	0	0	0	0	0	0	0
113-38		07/15	28	1	0	0	0	0	0	0	0
		07/22	29	1	1	0	0	2	2	47	51
		07/29	30	1	2	0	0	0	2	221	223
		08/05	31	1	0	0	0	0	0	0	0
		08/12	32	1	1	0	0	0	0	200	200
		08/19	33	1	25	0	0	34	110	2,428	2,572
		Total:				0	0	36	114	2,896	3,046

-Continued-

Table 5. (Page 7 of 7)

Terminal Areas	Dates	Week	Days	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Terminal Fishery		20		0	0	0	0	0	0	0
Totals by Week		21		0	0	0	0	0	0	0
		22		16	89	0	0	0	0	89
		23		17	249	0	0	0	0	249
		24		25	243	0	0	0	0	243
		25		19	440	0	1	0	2	443
		26		17	318	2	13	0	4	337
		27		0	0	0	0	0	0	0
		28		0	0	0	0	0	0	0
		29		1	0	0	2	2	47	51
		30		2	0	0	0	2	221	223
		31		0	0	0	0	0	0	0
		32		1	0	0	0	0	200	200
		33		25	0	0	34	110	2,428	2,572
		34		0	0	0	0	0	0	0
		35		0	0	0	0	0	0	0
		36		0	0	0	0	0	0	0
		37		0	0	0	0	0	0	0
		38		0	0	0	0	0	0	0
		39		0	0	0	0	0	0	0
		40		0	0	0	0	0	0	0
	1995 Total:			123	1,339	2	50	114	2,902	4,407

Table 6. Chinook salmon catch per fleet day (rounded to nearest hundred) in the Southeast Alaska troll fishery during the general summer season, April 15 - September 30, 1984 -1995.[a]

Year	Fishing Period	Number of Days	Chinook Catch	Fish Per Fleet Day
1984	JUN 5-30	26	130,000	5,000
	JUL 11-29	19	77,000	4,100
	COMBINED	45	207,000	4,600
1985	JUN 3-12	10	66,000	6,600
	JUL 1-22	22	114,000	5,200
	COMBINED	32	180,000	5,600
1986	JUN 20 - JUL 15	26	155,000	6,000
1987	JUN 20 - JUL 12	23	209,000	9,100
1988	JUL 1-12	12	162,000	13,500
1989	JUL 1-13	13	167,000	12,800
1990	JUL 1-22	22	200,000	9,100
	AUG 23-24	2	12,000	5,900
	COMBINED	24	212,000	8,800
1991	JUL 1-8 (noon)	7.5	154,000	20,500
1992	JUL 1-4 (noon)	3.5	66,000	19,000
	AUG 23	1	7,000	7,000
	COMBINED	4.5	73,000	16,200
1993	JUL 1-6	6	101,000	17,000
	AUG 21-25	5	25,000	5,000
	SEP 12-20	9	19,000	2,000
	COMBINED	20	144,000	7,200
1994	JUL 1-7	7	98,000	14,000
	AUG 29 - SEPT 2	5	20,000	4,000
	COMBINED	12	118,000	9,800
1995	JUL 1-10	10	76,000	7,600
	JUL 30 - AUG 5	7	21,000	3,000
		17	97,000	5,700

[a] From 1986 to 1992, limited troll openings were allowed periodically in June in a number of near-terminal hatchery areas and/or inside fishing districts to access Alaska hatchery chinook salmon. Beginning in 1986, openings harvest coded "Experimental Fishery" (harvest code 13) were allowed in specific inside water areas to harvest chinook salmon returning to Alaska hatcheries. Beginning in 1989, in addition to the "Experimental Fishery" areas, other areas, termed "Hatchery Access" areas were identified for further exploration of harvest areas for Alaska hatchery chinook salmon. A separate harvest code for these "Hatchery Access" areas, however, was not established, and catches from these areas were simply lumped in with the "Traditional Fisheries" (code 11) harvest. In addition to the "Hatchery Access" and "Experimental Fishery" areas, "Terminal" (code 13) harvests occur in bays in the immediate vicinity of hatcheries, and target individual hatchery stocks.

Table 7. Number of days, effort (boat days) and dates the Southeast Alaska troll fishery was open [chinook retention (CR)], closed to chinook salmon fishing [chinook non-retention (CNR)], and closed to all species (all) during the general summer season, April 15 - September 30. 1978 - 1995.

	Open Periods					Closed Periods			
Year	Days[a] Open	Days Closed	Dates Open	CR Days	CR Effort in Boat Days[b] (summer total)	Closed Periods	Number of Days	CNR Days	CNR Effort in Boat Days[b] (summer total)
1978	169	0	Apr 15- Sep-30	169		None		0	
1979	169	0	Apr 15- Sep-30	169		None		0	
1980	149	20	Apr 15- Jul-14	91		Jul-15- Jul-24	10 (all)	0	
			Jul-25- Sep-20	58		Sep-21- Sep-30	10 (all)		
1981	101	69	May 15- Jun-25	42		Apr-15- May-14	30 (all)		
			July 5- Aug-06	36		Jun-26- Jul-04	9 (all)		
			Aug 20- Sep-03	15		Aug-10- Aug-19	10 (all)		
			Sep-13- Sep-20	8	76,751	Sep-04- Sep-12	9		
						Sep-21- Sep-30	10 (all)	9	3,526
1982	65	104	May 15- Jun-06	23		Apr-15- May-14	30 (all)		
			Jun-17- Jul-28	42	53,371	Jun-07- Jun-16	10 (all)		
						Jul-29- Aug-07	10 (all)		
						Aug-08- Sep-20	44		
						Sep-21- Sep-30	10 (all)	44	32,727
1983	60	109	May 15- Jun-08	25		Apr-15- May-14	30 (all)		
			July 1- Aug-04	35	48,734	Jun-09- Jun-30	22 (all)		
						Aug-05- Aug-14	10 (all)		
						Aug-15- Sep-20	37		
						Sep-21- Sep-30	10 (all)	37	18,396
1984	45	124	June 5- Jun-30	26		Apr-15- Jun-04	51 (all)		
			Jul-11- Jul-29	19	33,641	Jul-01- Jul-10	10 (all)		
						Jul-30- Aug-14	16		
						Aug-15- Aug-24	10 (all)		
						Aug-25- Sep-20	27		
						Sep-21- Sep-30	10 (all)	43	29,583

-Continued-

Table 7. (Page 2 of 4)

	Open Periods					Closed Periods			
Year	Days[a] Open	Days Closed	Dates Open	CR Days	CR Effort in Boat Days[b] (summer total)	Closed Periods	Number of Days	CNR Days	CNR Effort in Boat Days[b] (summer total)
1984	45	124	June 5- Jun-30	26		Apr-15- Jun-04	51 (all)		
			Jul-11- Jul-29	19	33,641	Jul-01- Jul-10	10 (all)		
						Jul-30- Aug-14	16		
						Aug-15- Aug-24	10 (all)		
						Aug-25- Sep-20	27		
						Sep-21- Sep-30	10 (all)	43	29,583
1985	33.6	135.4	June 3- Jun-12	10		Apr-15- Jun-02	49 (all)		
			July 1- Jul-22	22		Jun-13- Jun-30	18 (all)		
			Aug 25- Aug 26[c]	1.6	30,934	Jul-23- Aug-14	23		
						Aug-15- Aug-24	10 (all)		
						Aug-26- Sep-20	25.4		
						Sep-21- Sep-30	10 (all)	48.4	35,509
1986	41	128	Jun-20- Jul-15	26		Apr-15- Jun-19	66 (all)		
			Aug 21- Aug-26	6		Jul-16- Aug-10	26		
			Sept 1- Sep-09	9	26,496	Aug-11- Aug-20	10 (all)		
						Aug-27- Aug-31	5		
						Sep-10- Sep-20	11		
						Sep-21- Sep-30	10 (all)	42	37,265
1987	23	146	Jun-20- Jul-12	23	19,079	Apr-15- Jun-19	66 (all)		
						Jul-13- Aug-02	21		
						Aug-03- Aug-12	10 (all)		
						Aug-13- Sep-20	39		
						Sep-21- Sep-30	10 (all)	60	37,219

- Continued -

Table 7. (Page 3 of 4)

Year	Open Periods: Days[a] Open	Days Closed	Dates Open	CR Days	CR Effort in Boat Days[b] (summer total)	Closed Periods	Number of Days	CNR Days	CNR Effort in Boat Days[b] (summer total)
1988	12	157	July 1- Jul-12	12	9,509	Apr-15- Jun-30	77 (all)		
						Jul-13- Jul-25	13		
						Jul-26- Aug-04	10 (all)		
						Aug-05- Aug-14	10		
						Aug-15- Aug-24	10 (all)		
						Aug-25- Aug-31	7		
						Sep-01- Sep-03	3 (all)		
						Sep-04- Sep-20	17		
						Sep-21- Sep-30	10 (all)	47	27,344
1989[d]	13	156	July 1- Jul-13	13	9,585	Apr-15- Jun-30	77 (all)		
						Jul-14- Aug-13	31		
						Aug-14- Aug-23	10 (all)		
						Aug-24- Sep-20	28		
						Sep-21- Sep-30	10 (all)	59	38,424
1990[d]	24	145	July 1- Jul-22	22		Apr-15- Jun-30	77 (all)		
			Aug 23- Aug-24	2	17,175	Jul-23- Aug-12	21		
						Aug-13- Aug-22	10 (all)		
						Aug-25- Sep-20	27		
						Sep-21- Sep-30	10 (all)	48	29,528
1991[d]	7.5	161.5	July 1- Jul-08	7.5	4,718	Apr-15- Jun-30	77 (all)		
						Jul-08- Aug-15	38.5		
						Aug-16- Aug-24	10 (all)		
						Aug-25- Sep-20	26		
						Sep-21- Sep-30	10 (all)	64.5	32,556

- Continued -

Table 7. (Page 4 of 4)

Year	Open Periods: Days[a] Open	Days Closed	Dates Open	CR Days	CR Effort in Boat Days[b] (summer total)	Closed Periods: Closed Periods	Number of Days	CNR Days	CNR Effort in Boat Days[b] (summer total)
1992[d]	4.5	164.5	July 1- Jul-04	3.5		Apr-15- Jun-30	77 (all)		
			Aug-23- Aug-24	1	2,882	Jul-04- Aug-12	39.5		
						Aug-13- Aug-22	10 (all)		
						Aug-24- Sep-20	28		
						Sep-21- Sep-30	10 (all)	67.5	36,306
1993[d]	20	149	Jul-01- Jul-06	6		Apr-15- Jun-30	77 (all)		
			Aug-21- Aug-25	5		Jul-07- Jul-11	5 (all)		
			Sept. 12 Sep-20	9	7,635	Jul-12- Aug-12	32		
						Aug-13- Aug-20	8 (all)		
						Aug-26- Sep-11	17		
						Sep-21- Sep-30	10 (all)	49	35,156
1994[d]	12		Jul-01- Jul-07	7		Apr-15- Jun-30	77 (all)		
			Aug-29- Sep-02	5	6,434	Jul-08- Aug-26	52		
						Aug-27- Aug-28	2 (all)		
						Sep-03- Sep-30	28	80	35,718
1995	17		Jul-01- Jul-10	10		Apr-15- Jun-30	77 (all)		
			Jul-30- Aug-05	7	7,048	Jul-11- Jul-29	19		
						Aug-06- Aug-12	7		
						Aug-13- Aug-22	10 (all)		
						Aug-23- Sep-30	39	65	24,705

[a] Number of days the major portion of Southeast Alaska was open to chinook salmon fishing.

[b] Boat days estimated from inseason dockside interviews with troll fisherman and actual landings from fish tickets tabulated postseason.

[c] Trolling was open to all species for 39 hours, 12:01 am Aug 25 to 3:00 pm Aug 26.

[d] Hatchery access fisheries were conducted for 6 days each year in June, except in 1991, when only 4.5 were open.

Table 8. Contribution in numbers and percent of chinook salmon produced by Alaskan and other hatcheries, in the winter, experimental, terminal, hatchery access and general summer troll fisheries, 1989-1995.

		Alaskan Hatcheries		Other Hatcheries		Total Hatcheries	
Year	Total Catch[a]	Number	Percent	Number	Percent	Number	Percent
Winter							
1989	34,300	4,915	14%	7,039	21%	11,749	34%
1990	33,130	4,433	13%	9,845	30%	14,278	43%
1991	42,600	10,246	24%	13,399	31%	23,505	55%
1992	71,800	6,977	10%	28,875	40%	35,851	50%
1993	62,700	3,862	6%	25,598	41%	29,450	47%
1994	56,400	1,957	3%	19,498	35%	21,455	38%
1995	17,868	2,131	12%	7,708	43%	9,839	55%
Experimental							
1989	2,500	854	34%	39	2%	893	36%
1990	7,100	4,250	60%	[b]		4,425	62%
1991	14,000	6,159	44%	1,903	14%	8,461	60%
1992	11,200	5,378	48%	2,663	24%	8,041	72%
1993	15,800	6,574	42%	2,001	13%	8,101	51%
1994	11,300	4,922	44%	2,292	20%	7,214	64%
1995	21,742	13,987	64%	1,137	5%	15,124	70%
Terminal							
1989	1,100	1,100	100%				
1990	16	0	0%				
1991	6,000	4,882	81%				
1992	4,100	3,588	88%				
1993	2,800	2,433	87%				
1994	100	15	15%				
1995	1,339	854	64%				
Hatchery Access							
1989	31,200	4,575	15%	8,310	27%	12,885	41%
1990	34,900	6,653	19%	12,700	36%	19,232	55%
1991	46,500	8,577	18%	10,812	23%	19,943	43%
1992	23,800	6,625	28%	8,590	36%	15,217	64%
1993		-no fishery after 1992-					
General Summer							
1989	167,000	5,225	3%	30,268	18%	35,493	21%
1990	212,000	14,281	7%	70,908	33%	85,097	40%
1991	154,000	6,606	4%	54,131	35%	59,070	38%
1992	72,600	2,460	3%	30,823	42%	33,282	46%
1993	145,100	4,931	3%	37,361	26%	42,237	29%
1994	118,400	5,341	5%	28,033	24%	33,374	28%
1995	97,159	9,724	10%	21,016	22%	30,740	32%
Total[c]							
1989	236,100	16,669	7%	45,656	19%	62,120	26%
1990	287,146	29,617	10%	93,453	33%	123,048	43%
1991	263,100	36,470	14%	80,245	30%	116,979	44%
1992	183,500	25,028	14%	70,951	39%	96,509	53%
1993	226,400	17,800	8%	64,960	29%	82,637	37%
1994	186,200	12,235	7%	64,961	35%	82,638	44%
1995	305,108	31,921	10%	64,962	21%	82,639	27%

[a] Does not include Annette Island catches.

[b] 1990 hatchery access total for other hatchery production includes experimental fishery.

[c] Totals may not agree with other totals due to rounding.

Table 9. Minimum estimated contributions of hatchery chinook salmon to sampled marine boat sport fisheries of Southeast Alaska during 1995 (preliminary).

	Marine Boat Sport Fishery						
Region or Hatchery	Ketchikan 4/24-9/24	PWI 5/01-9/10	Petersburg 5/08-7/16	Wrangell 5/01-7/16	Sitka 4/24-9/24	Juneau 4/24-9/24	Total
Oregon	0	0	0	0	53	12	65
Washington	0	21	0	0	942	0	963
British Columbia							
Robertson Creek	33	363	0	0	825	0	1,221
Other British Columbia	132	1,879	22	12	1,530	48	3,623
Non-Alaska Total	165	2,263	22	12	3,350	60	5,872
Alaska							
Burnett Inlet (AAI)	0	0	2	0	11	0	13
Crystal Lake (ADF&G)	0	0	477	107	52	163	799
Deer Mountain (ADF&G)	105	7	0	0	2	0	114
Jerry Myers (ADF&G)	0	0	0	0	0	9	9
Snettisham (ADF&G)	0	0	0	0	11	675	686
Port Armstrong (AKI)	0	0	12	0	25	0	37
Tamgas Creek (MIC)	199	0	5	0	0	0	204
L. Port Walter (NMFS)	0	17	43	0	33	104	197
Hidden Falls (NSRAA)	0	0	101	0	47	1,467	1,615
Medvejie (NSRAA)	0	251	0	0	4,907	0	5,158
Sheldon Jackson (SJC)	0	0	0	0	338	0	338
Carroll Inlet (SSRAA)	235	0	0	0	258	0	493
Neets Bay (SSRAA)	117	0	27	30	4	10	188
Whitman Lake (SSRAA)	43	0	0	8	14	12	77
Gastineau Hatchery (DIPAC)	0	0	0	0	0	433	433.
Bell Island	24	0	0	0	0	0	24
Alaska Total	723	275	667	145	5,702	2,873	10,385
All Areas Total	888	2,538	689	157	9,052	2,933	16,257
Creel Survey Harvest[a]	3,499	7,551	1,059	952	16,048	6,371	35,480
Percent Alaska Hatchery	21%	4%	63%	15%	36%	45%	29%
Percent Total Hatchery	25%	34%	65%	16%	56%	46%	46%

[a] Not expanded to entire season/area, Craig and Wrangell estimates based on catch sampling programs only.

Table 10. Actual and projected releases of chinook salmon by brood year.

Hatchery	1995 Chinook Smolt Capacity		Number of Smolts Released by Brood Year (thousands)																Projected Releases (thousands)	
	Age	(thousands	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Little Port Walter	0		28.9							102.0	90.6									
	1	300.0	165.2	30.6	20.3	129.5	176.2	192.7	213.0	205.0	286.7	161.8	166.0	187.0	300.0	201.0	144.6	208.4	183.5	205.0
Tamgas	0	1,000.0						70.3	150.0	555.5	2,111.7	1,756.3		721.0	878.7	287.0	893.0	1,060.0	900.0	950.0
	1	350.0					48.9	391.2	573.4	1,445.7	164.4	888.9	1,131.8	670.9	527.0	339.0	300.0	300.0	300.0	165.0
Crystal Lake	0		16.2	13.7	273.8	59.1		36.1												
	1	940.0		42.2		137.9	666.0	135.0	650.0	684.0	1,033.0	1,100.0	1,378.0	833.8	888.4	899.0	855.6	655.5	800.0	1,300.0
Deer Mountain	0						80.9	304.8	480.6	423.0	323.2									
	1	100.0	72.1	65.7	118.8	147.0			46.4	42.0	121.0	191.0	121.0	153.5	135.2	71.3	85.0	98.7	95.0	100.0
Hidden Falls	1	1,100.0				81.0	70.0	97.0	92.1	97.0	159.0	343.7	351.0	184.5	1,544.0	1,755.0	1,053.0	924.0	1,000.0	1,100.0
Snettisham	1			26.7	39.2	234.0	286.0	109.1	387.2	1,047.0	430.4	1,224.0	1,631.0	91.2	286.0	206.5	284.0	392.0		
	2												307.0		109.0					
Whitman Lake	0								12.6	280.0	435.0			27.0	29.5					
	1	775.0			145.6	78.7		27.2	150.0	915.0	1,043.0	758.0	1,080.0	1,176.0	1,324.0	1,171.0	1,708.0	947.0	775.0	750.0
Neets Bay	0							205.9	800.8	2,300.0	2,733.0									
	1	325.0				135.2	140.0	231.4	1,115.0	734.0	708.0	700.0	1,608.0	900.0	728.5	377.7	215.0		325.0	650.0
Medvejie	1	1,100.0					26.6	21.9	108.0	227.5	174.6	743.7	921.0	866.0	1,145.0	762.0	1,083.0	1,130.0	1,055.0	1,000.0
Port Armstrong	1	1,500.0								70.0	76.0	89.9	144.0	62.2	397.9	1,264.4				
Sheldon Jackson	1	100.0							54.2	47.0	32.0	96.7	100.5	51.0	94.1	89.4	103.4	104.0	102.5	78.4
Burnett Inlet	1											170.0	193.0	100.0	54.2					
Jerry Myers	1	12.0								6.1	4.7	1.7	6.4	7.0	12.0	13.0	1.7	2.0	12.0	15.0
Gastineau	1	390.0											101.5	44.0	192.0	207.5	241.4	189.0	390.0	584.2
Burro Creek	1	50.0													7.1	8.6	8.8	7.0	35.0	15.0
Subtotal	0	1,000.0	45.1	13.7	273.8	59.1	80.9	617.1	1,444.0	3,660.5	5,693.5	1,756.3	0.0	748.0	908.2	287.0	893.0	1,060.0	900.0	950.0
	1&2	7,042.0	237.3	165.2	323.9	943.3	1,413.7	1,205.5	3,389.3	5,520.3	4,232.8	6,469.4	9,240.2	5,327.1	7,744.4	7,365.4	6,083.5	4,957.6	5,073.0	5,962.6
Total		8,042.0	282.4	178.9	597.7	1,002.4	1,494.6	1,822.6	4,833.3	9,180.8	9,926.3	8,225.7	9,240.2	6,075.1	8,652.6	7,652.4	6,976.5	6,017.6	5,973.0	6,912.6

Table 11. Estimated harvest of Alaska hatchery-produced chinook salmon in Southeast Alaska, 1980–1995.

	Gear Type			Cost	Brood	
Year	Troll	Net	Sport	Recovery	Escapement	Total Return
1980	5,877	363	N/A	0	N/A	8,571
1981	1,949	59	N/A	0	N/A	3,985
1982	943	212	N/A	0	N/A	2,105
1983	1,857	113	872	0	1,451	4,293
1984	3,626	563	1,904	0	6,029	12,122
1985	8,100	2,400	3,372	2,011	9,819	25,702
1986	9,900	2,700	5,010	1,900	10,063	29,573
1987	16,600	2,300	5,108	2,466	15,426	41,900
1988	19,716	5,154	5,545	8,670	13,732	52,817
1989	18,804	8,831	6,351	17,748	13,071	64,805
1990	30,040	12,341	16,612	20,824	14,696	94,513
1991	38,336	14,488	18,818	25,854	14,425	111,921
1992	25,687	9,432	9,983	20,523	13,004	78,629
1993	17,805	13,999	9,279	22,929	14,712	78,724
1994	12,069	5,726	6,110	17,401	18,632	66,708
1995	26,187	22,506	9,983	23,690	29,680	112,046 [a]

[a] This number does not include 314 chinooks caught in Canadian fisheries.

Table 12. Estimated harvest and escapement of chinook salmon from Southeast Alaska hatcheries in 1995.

	Harvest					Rack Return		
Hatchery	Troll	Net	Sport	Canadian	Cost Recovery	Adults	Jacks	Total
Jerry Myers	21	107	28	0	0	58	0	214
Burro Creek	0	2	3	--	--	2	0	7
Gastineau	248	667	439	--	542	2,214 [a]	54	4,164
Snettisham	31	90	92	--	--	15	0	228
Hidden Falls	5,657	12,077 [b]	1,546	--	2,239	9,035	1,309	31,863
Sheldon Jackson	660	46	168	--	0	320	0	1,194
Medvejie Creek	12,593	2,314	5,170	62	18,864	871	6,407	46,281
Crystal Lake	2,500	5,484	1,050 [c]	--	--	2,130 [d]	1,035	12,199
Little Port Walter	1,604	692	217	14	25	1,697	941	5,190
Port Armstrong	551	152	43	--	304	1,050	0	2,100
Neets Bay	860	91	187	32	1,109	0	0	2,279
Deer Mountain	132	32	260	34	--	287	96	841
Whitman Lake	115	29	77	14	--	333	451	1,019
Carroll Inlet	1,087	431	493	132	7	625	0	2,775
Tamgas Creek	93	268	203	26	600	750	0	1,940
Farragut/CLH	21	15	1	--	--	0	0	37
Harding River	14	9	6	--	--	0	0	29
Totals	26,187	22,506	9,983	314	23,690	19,387	10,293	112,360

[a] Includes 733 brood fish and 1,481 fish surplus to all other categories.

[b] 1,221 BY92 jacks not included in this number, but are included in jacks number.

[c] Does not include statewide harvest survey data for FY95.

[d] Includes mortalities at Blind Slough rapids.

Table 13. Exploitation rate (%) of chinook salmon at various enhancement facilities in Southeast Alaska by return year.

	Hatchery														
Return Year	Crystal Lake	Little Port Walter	Deer Mountain	Hidden Falls	Whitman Lake	Carroll Inlet	Neets Bay	Snettisham	Medvejie Creek	Tamgas Creek	Sheldon Jackson	Port Armstrong	Jerry Myers	Gastineau	Burro Creek
1980	86.4	97.0													
1981	66.3	67.5	79.2												
1982	40.6	66.0	62.2					85.7							
1983	28.4	46.5	51.0					36.4							
1984	51.6	39.2	47.7		39.5			89.2							
1985	58.2	60.1	51.1	79.1	34.7		47.9	83.0							
1986	63.6	44.1	40.8	95.7	25.0		61.1	81.3							
1987	63.2	44.4	59.7	81.0	38.0		44.9	76.8		94.6					
1988	43.4	36.2	34.7	52.5	52.2		42.6	76.9	26.1	51.7					
1989	42.0	37.5	34.9	38.6	42.2	59.5	32.8	53.7	43.0	54.2					
1990	51.4	63.9	47.5	59.0	66.2	52.5	23.4	69.9	44.0	48.8	25.5	54.2			
1991	88.1	70.5	38.1	63.2	54.5	53.6	46.2	89.4	25.8	39.5	23.3	47.9			
1992	85.1	50.9	19.9	46.9	30.5	58.2	35.0	82.4	38.0	38.4	58.0	53.3			
1993	92.0	44.1	57.6	58.0	41.4	51.4	28.7	80.2	34.8	50.9	43.5	26.4	30.0	33.8	
1994	20.1	49.2	49.3	40.0	41.1	85.8	32.0	71.5	41.4	39.9	43.2	64.5	61.3	27.3	100.0
1995[a]	80.9	59.5	61.5	63.1	41.4	77.2	51.3	93.4	50.5	30.4	73.2	35.5	72.9	32.9	71.4

[a] Preliminary data — excludes mini-jacks and 1-ocean returns.

Table 14. Percent distribution of troll catch of hatchery chinook by PMFC area, 1980-1995

Facility/Stock/Fishery		PMFC Area										
		LYN	NOUT	COUT	CNTR	STEP	SNTR	CIN	SOUT	SIN	Catch	%
Tahini River												
	winter	0%	0%	0%	31%	0%	17%	0%	0%	0%	48	48%
	summer	0%	0%	0%	25%	0%	11%	13%	0%	4%	53	52%
Lutak Inlet												
Tahini R.	winter	0%	0%	0%	69%	0%	0%	0%	0%	0%	27	69%
	summer	0%	8%	0%	21%	0%	3%	0%	0%	0%	12	31%
Jerry Myers												
Tahini R.	winter	0%	0%	5%	22%	0%	0%	0%	0%	0%	16	27%
	summer	20%	0%	3%	49%	0%	0%	0%	0%	0%	43	73%
Gastineau												
Gastineau	winter	0%	0%	0%	0%	0%	35%	0%	0%	0%	86	35%
	summer	0%	20%	10%	20%	0%	15%	0%	0%	0%	161	65%
Andrew Cr.	winter	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%
	summer	0%	0%	0%	41%	0%	59%	0%	0%	0%	22	100%
Snettisham												
King Salmon R.	winter	0%	0%	0%	1%	2%	31%	0%	0%	0%	154	34%
	summer	0%	0%	0%	11%	9%	37%	5%	3%	0%	302	66%
Andrew Cr.	winter	0%	0%	3%	11%	1%	25%	0%	0%	0%	2,428	40%
	summer	0%	1%	5%	19%	1%	32%	0%	0%	0%	3,645	60%
Ketchikan Cr.	winter	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%
	summer	0%	0%	0%	34%	0%	66%	0%	0%	0%	38	100%
Hidden Falls												
Tahini R.	winter	0%	0%	12%	33%	0%	8%	0%	0%	0%	261	53%
	summer	0%	1%	4%	31%	0%	11%	0%	0%	0%	231	47%
Andrew Cr.	winter	0%	0%	1%	13%	0%	9%	0%	0%	0%	787	23%
	summer	0%	3%	5%	38%	0%	30%	0%	0%	0%	2,633	77%
Medvejie Cr.	winter	0%	0%	1%	0%	0%	5%	1%	0%	0%	356	6%
	summer	0%	2%	5%	72%	0%	14%	0%	0%	0%	5,127	94%
Farragut R.	winter	0%	0%	0%	0%	0%	33%	0%	0%	0%	4	33%
	summer	0%	0%	0%	0%	0%	67%	0%	0%	0%	8	67%
Hidden Falls	winter	0%	0%	20%	0%	0%	13%	0%	0%	0%	5	33%
	summer	0%	0%	27%	0%	0%	40%	0%	0%	0%	10	67%
Sheldon Jackson												
Andrew Cr.	winter	0%	0%	0%	0%	0%	0%	0%	0%	0%	5	0%
	summer	0%	1%	94%	0%	0%	4%	0%	1%	0%	1,121	100%
Indian R.	winter	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%
	summer	0%	0%	100%	0%	0%	0%	0%	0%	0%	36	100%
Sheldon Jcksn	winter	0%	0%	96%	4%	0%	0%	0%	0%	0%	557	100%
	summer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%
Medvejie Creek												
Andrew Cr.	winter	0%	0%	7%	3%	0%	1%	0%	0%	0%	1,845	11%
	summer	0%	1%	82%	1%	0%	4%	0%	2%	0%	15,423	89%
Chickamin	winter	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%
	summer	0%	10%	87%	0%	0%	3%	0%	4%	1%	2,143	100%
Medvejie Cr.	winter	0%	0%	1%	0%	0%	6%	1%	0%	0%	300	8%
	summer	0%	1%	87%	0%	0%	0%	0%	2%	0%	3,384	92%
Whitman Lk.	winter	0%	0%	5%	0%	0%	1%	0%	0%	0%	529	6%
	summer	0%	2%	87%	1%	0%	2%	1%	1%	0%	8,210	94%
Farragut River												
	winter	0%	0%	0%	3%	1%	28%	0%	0%	0%	114	33%
	summer	0%	1%	1%	5%	2%	57%	1%	1%	0%	234	67%
Crystal Lake												
Andrew Cr.	winter	0%	0%	2%	2%	1%	23%	2%	0%	0%	19,279	31%
	summer	0%	1%	4%	7%	1%	37%	15%	2%	2%	43,504	69%
Little Port Walter												
Unuk R.	winter	0%	0%	2%	3%	0%	19%	0%	0%	0%	4,447	25%
	summer	0%	3%	8%	12%	0%	49%	1%	2%	0%	13,450	75%
Chickamin R.	winter	0%	0%	2%	2%	0%	20%	0%	0%	0%	2,453	25%
	summer	0%	2%	5%	12%	1%	54%	0%	1%	0%	7,511	75%
King Salmon R	winter	0%	0%	5%	1%	0%	22%	0%	0%	0%	156	29%
	summer	0%	1%	5%	15%	0%	49%	1%	0%	0%	384	71%

-Continued-

Table 14. (page 2 of 2)

Facility/Stock/Fishery		PMFC Area										
		LYN	NOUT	COUT	CNTR	STEP	SNTR	CIN	SOUT	SIN	Catch	%
Port Armstrong												
Unuk R.	winter	0%	0%	6%	8%	1%	13%	0%	0%	0%	795	28%
	summer	0%	0%	7%	11%	0%	51%	1%	1%	0%	2,038	72%
Harding River												
	winter	0%	0%	0%	0%	0%	11%	0%	0%	0%	5	11%
	summer	0%	0%	11%	0%	0%	15%	35%	7%	22%	41	89%
Burnett Inlet												
Andrew Ck	winter	0%	0%	2%	8%	0%	17%	0%	0%	0%	221	27%
	summer	0%	3%	4%	4%	0%	11%	33%	5%	23%	601	73%
Harding R.	winter	0%	0%	100%	0%	0%	0%	0%	0%	0%	4	100%
	summer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%
Neets Bay												
Unuk R.	winter	0%	0%	3%	3%	0%	9%	2%	0%	4%	5,553	20%
	summer	0%	3%	6%	7%	0%	11%	12%	9%	32%	21,838	80%
Neets Bay	winter	0%	0%	0%	0%	0%	2%	0%	0%	2%	14	4%
	summer	0%	29%	3%	0%	0%	30%	20%	15%	0%	361	96%
Whitman Lk.	winter	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%
	summer	0%	0%	43%	0%	0%	41%	0%	0%	16%	198	100%
Deer Mountain												
Unuk R.	winter	0%	0%	1%	2%	0%	14%	2%	0%	4%	1,237	23%
	summer	0%	4%	16%	6%	0%	8%	6%	11%	27%	4,223	77%
Ketchikan Cr.	winter	0%	0%	7%	0%	0%	0%	0%	0%	0%	7	7%
	summer	0%	0%	14%	0%	0%	29%	0%	3%	53%	97	93%
Reflection Lk.	winter	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%
	summer	0%	0%	0%	0%	0%	100%	0%	0%	0%	3	100%
Whitman Lake												
Chickamin R.	winter	0%	0%	5%	1%	0%	6%	1%	2%	9%	3,031	23%
	summer	0%	2%	3%	3%	0%	9%	7%	11%	41%	9,957	77%
Unuk R.	winter	0%	0%	1%	1%	0%	5%	0%	0%	2%	2,262	10%
	summer	0%	4%	6%	4%	0%	8%	3%	12%	53%	19,494	90%
Whitman Lk.	winter	0%	0%	0%	0%	0%	4%	0%	0%	0%	5	4%
	summer	0%	14%	17%	0%	0%	28%	0%	0%	37%	110	96%
Tamgas Creek												
Unuk R.	winter	0%	0%	5%	3%	0%	8%	1%	0%	9%	2,450	27%
	summer	0%	2%	5%	2%	0%	5%	3%	8%	48%	6,767	73%
Tamgas Creek	winter	0%	0%	0%	0%	0%	8%	0%	0%	0%	7	8%
	summer	0%	0%	29%	0%	0%	0%	7%	12%	45%	84	92%
Bell Island												
	winter	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0%
	summer	0%	0%	0%	0%	0%	0%	0%	0%	100%	2	100%

Table 15. Chinook salmon egg takes in Southeast Alaska in 1995.

				Disposition of Eggs		
Facility (or wild)	Stock	Females Spawned	Green Eggs (thousands)	Facility	Total # of Eyed Eggs (thousands)	Total # of Green Eggs (thousands)
Little Port Walter	Unuk R.	282	1,551.0	Little Port Walter	200.0	
				Crystal Lake	1,100.0	
	Chickamin R.	13	71.5	Little Port Walter	45.0	
	King Salmon R.	98	539.0	Little Port Walter	53.0	
				Gastineau	279.0	
Deer Mountain	Unuk	38	225.0	Deer Mountain		225.0
Crystal Lake	Andrew Cr.	316	1,711.0	Crystal Lake		1,711.0
Hidden Falls	Hidden Falls/Andrew Cr.	651	3,227.0	Hidden Falls		1,727.0
				Medvejie		1,500.0
Whit. Lake/Carrol Inlet	Chickamin R.	123	1,503.0	Whitman Lake		1,503.0
	Carrol Inlet/Chickamin R.	139				
Medvejie	Medvejie/Andrew Cr.	0	0.0			0.0
Tamgas	Unuk R.	272	1,585.5	Tamgas		1,585.5
Sheldon Jackson	Indian R./Andrew Cr.	24	127.7	Sheldon Jackson		127.7
Gastineau	Andrew Cr.	226	1,254.9	Gastineau		363.0[a]
Port Armstrong	King Salmon R.	0				
Jerry Myers	Tahini R.	3	20.0	Jerry Myers		20.0
Burro Creek/Pullen Cr.	Tahini R.	2	8.0	Burro Creek		21.0
	Pullen Cr./Tahini R.	2	13.0			
Harding River	(Wild)	0	0.0	Harding River		0.0
Farragut River	(Wild)	0				
Boulder Creek	(Wild)	12	65.0	Boulder Creek		65.0
Tahini River	(Wild)	0				
Total	Hatchery Return	2,187	11,823.6		1,677.0	8,485.2
	Wild	12	65.0			65.0

[a] Of the 1.25 million eggs, 50% were taken as back-up for KSR eggs from LPW, 50% were taken as back-up for Crystal L.H. 285,000 eyed KSR eggs were received from LPW. No eggs were sent to Crystal lake, all eggs excess to hatchery needs were sold as bait eggs

Table 16. Utilization of 1995-brood chinook salmon eggs in enhancement programs (numbers in thousands).

Facility (or wild)	Stock	Green Eggs (thousands)	Age-0 Smolts	Age-1 Smolts FW[a]	Age-1 Smolts SW[b]	Fry Plants Stream
Little Port Walter	Unuk R.	200.0		45.0	80.0	
	Chickamin R.	45.0		40.0		
	King Salmon R.	53.0		50.0		
Tamgas	Unuk R.	1,400.0	900.0		300.0	
Crystal Lake	Andrew Cr.	1,940.0		850.0 [c]		
	Unuk	1,040.0 [d]		400.0		
Deer Mountain	Unuk R./Ketchikan Cr.	225.0 [e]		100.0		
Hidden Falls	Hidden Falls/Andrew Cr.	1,726.9 [f]			1,100.0	
Whitman Lake	Chickamin R.	1,503.0		750.0		
Neets Bay	Chickamin R.	0.0			200.0 [g]	
	Earl West Cove/Andrew Creek	0.0			450.0	
Medvejie	Medvejie/Andrew Cr.	1,500.0 [h]		150.0	850.0	
Sheldon Jackson	Andrew Cr.	127.7		119.0		
Jerry Myers	Tahini R.	20.0			10.0	
Port Armstrong	King Salmon R.	0.0				
Gastineau	King Salmon R.	279.0 [i]		200.0		
	Andrew Cr.[c]	464.0				
Burro Creek	Tahini R.	21.0		15.0		
Jerry Meyers	Tahini R.	20.0		10.0		
Harding River	(Wild)	0.0				0.0
Boulder Creek	(Wild)	65.0				62.0
Total		10,544.6	900.0	2,684.0	2,910.0	62.0

[a] Fresh water.

[b] Salt water.

[c] 500,000 for release into Crystal Cr. 400,000 for release at Earl West Cove.

[d] Eggs taken at LPW, incubated at CLH for release at Neets Bay.

[e] Approximately 60,000 eyed eggs destroyed as excess. Actual eyed egg survival 89%.

[f] 1,471,330 is adjusted number after subtracting BKD positive eggs.

[g] Originate from Whitman Lake hatchery.

[h] 1,384,500 is adjusted number after subtracting BKD positive eggs.

[i] Eggs taken at LPW.

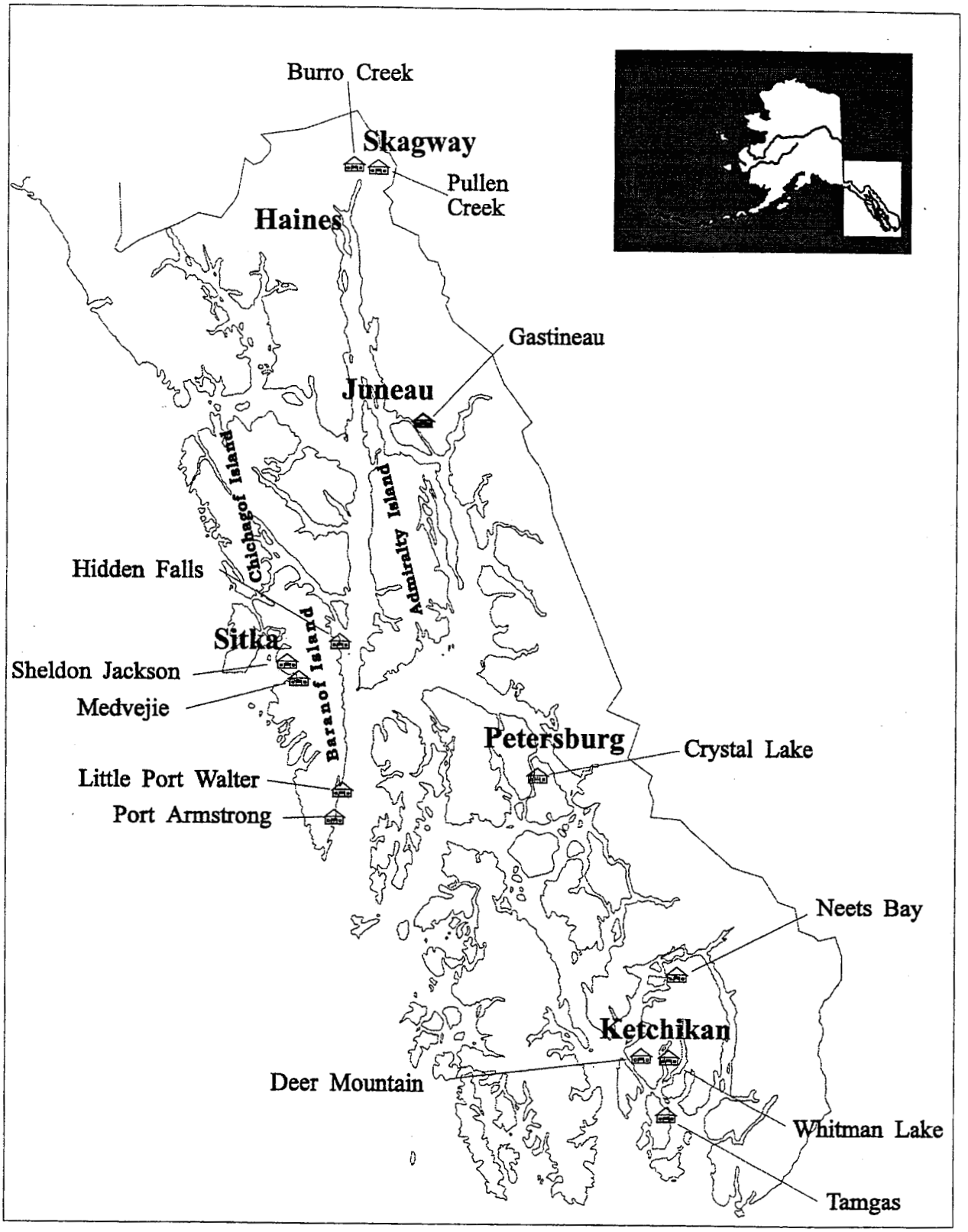


Figure 1. Chinook Salmon Hatcheries in Southeast Alaska.

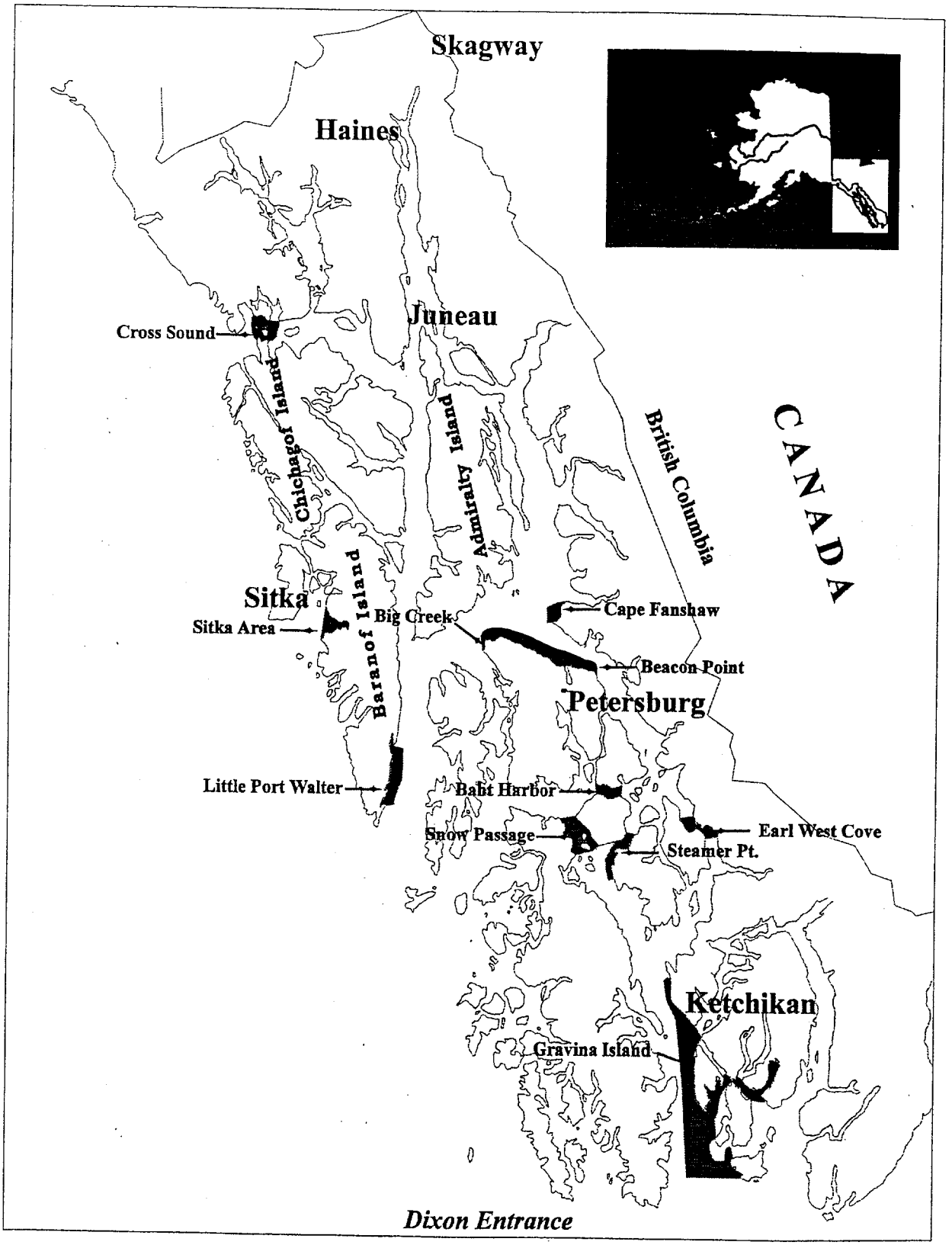


Figure 2. Experimental troll fishery areas (shaded waters with accompanying experimental fishery name) in Southeast Alaska.

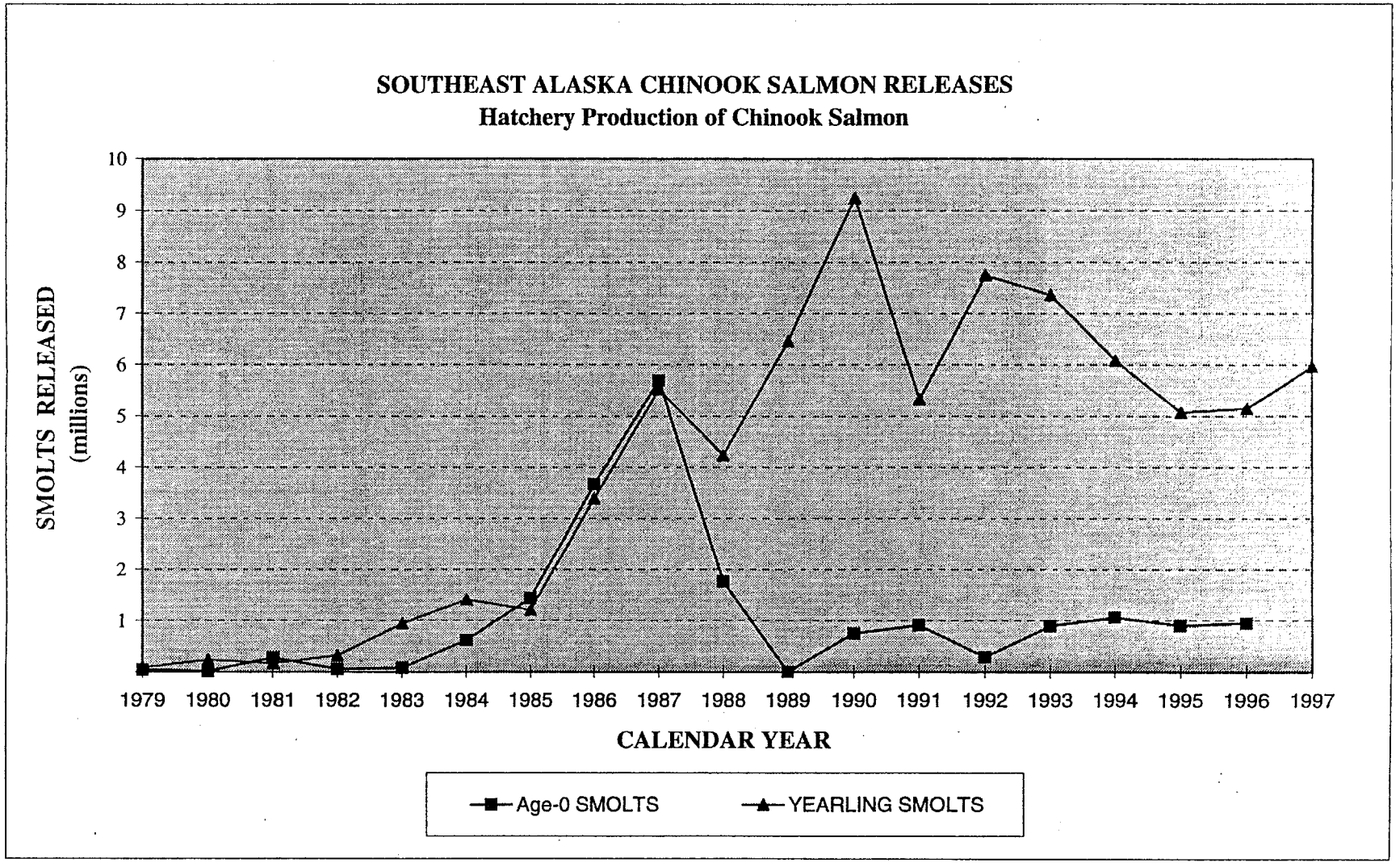


Figure 3. Actual and projected releases of hatchery-produced chinook salmon in Southeast Alaska by calendar year (1979-1995).

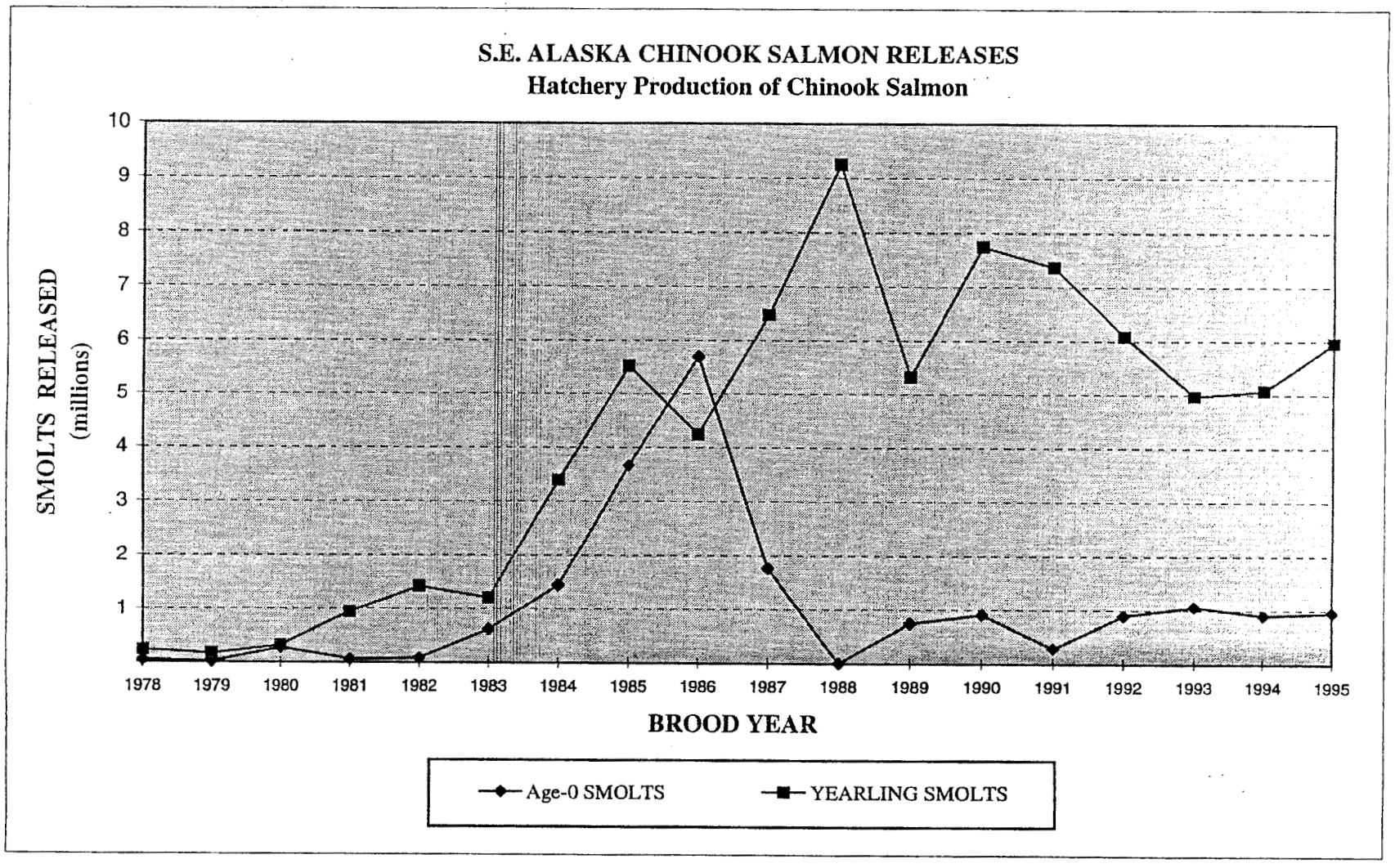


Figure 4. Actual and projected releases of hatchery-produced chinook salmon in Southeast Alaska by brood year (1979-1995).

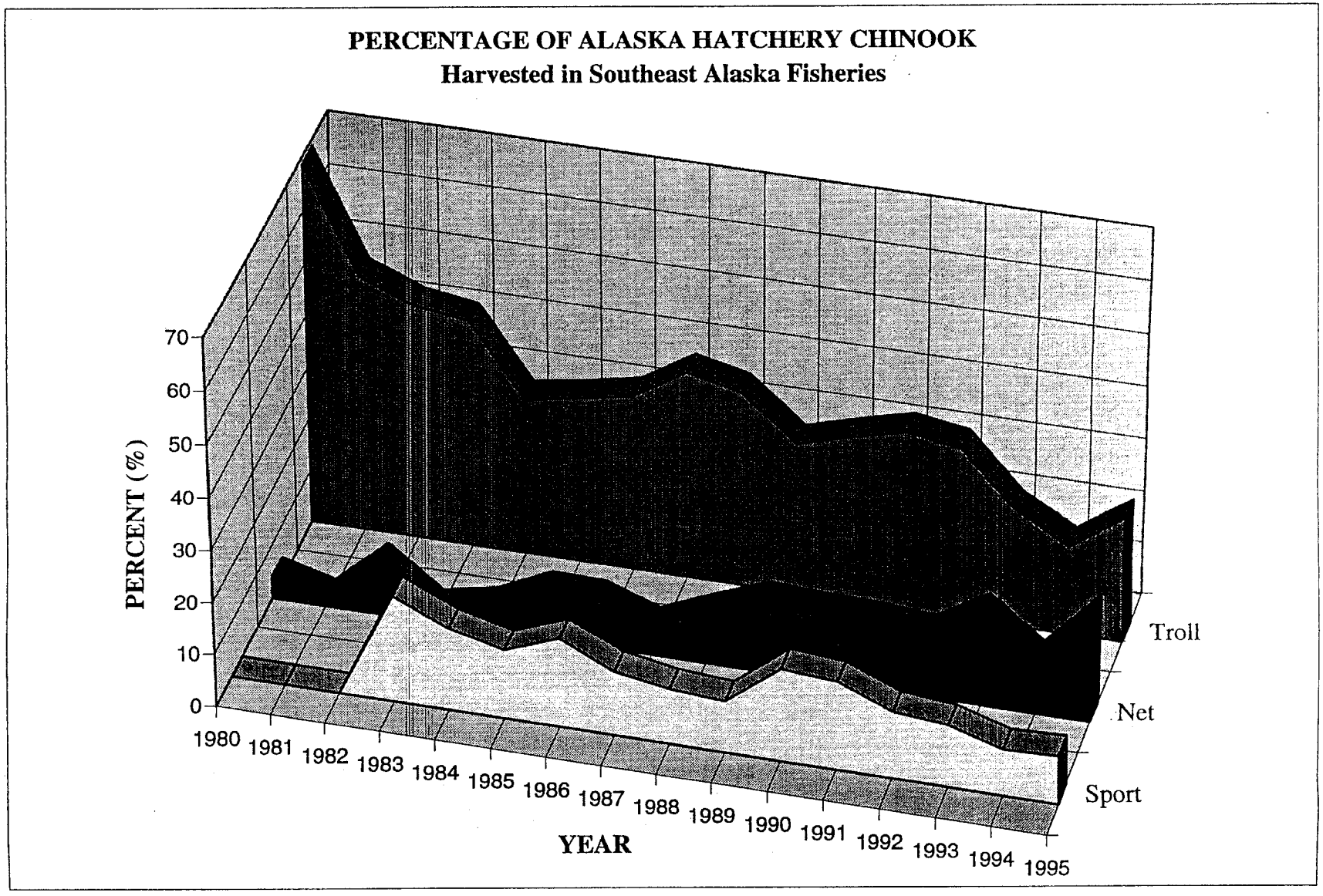


Figure 5. Percentage of Alaska hatchery-produced chinook salmon harvested in Southeast Alaska sport, net, and troll fisheries (1978-1995).

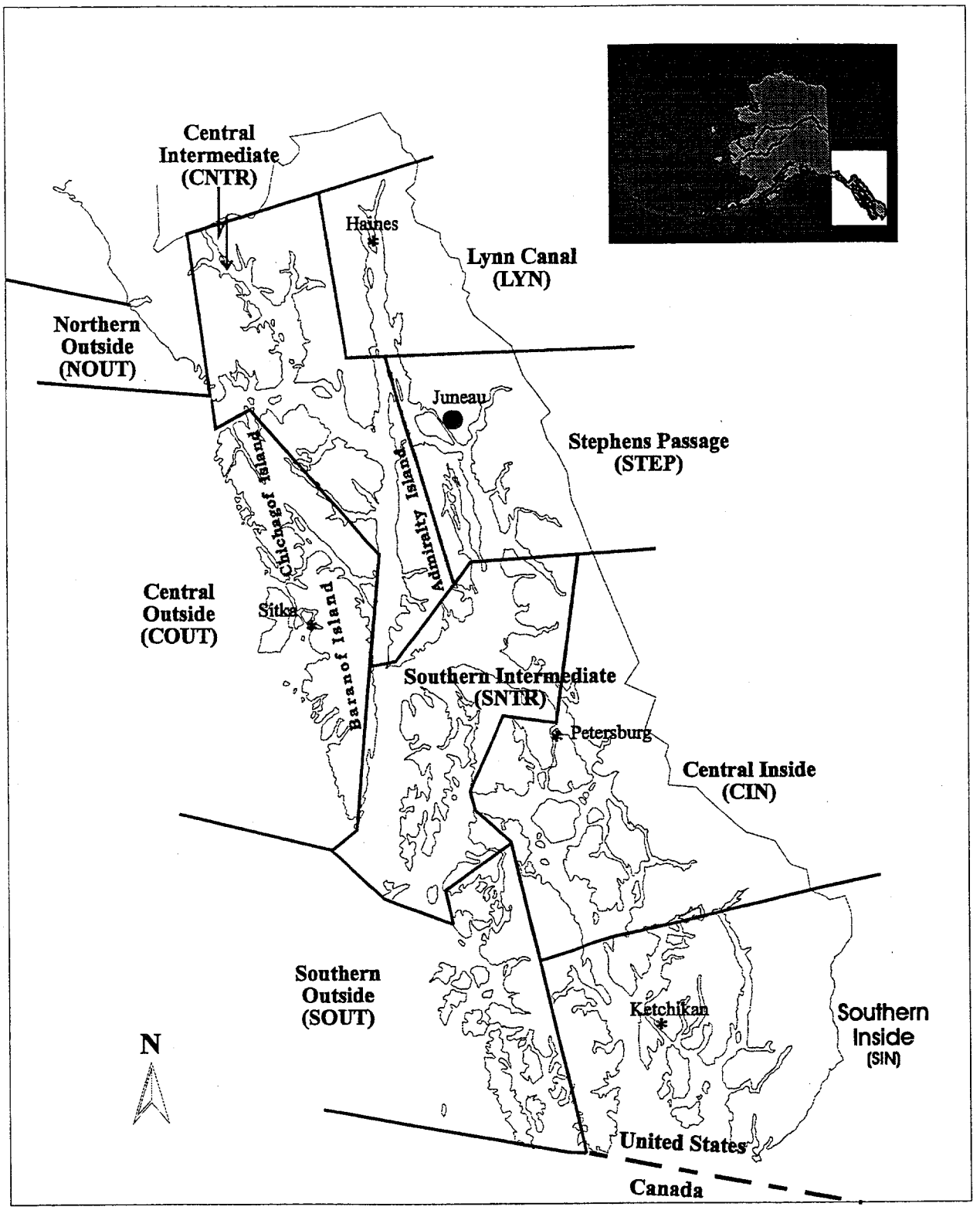


Figure 6. Pacific Marine Fisheries Commission (PFMC) areas in Southeast Alaska.